

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MICROSOFT CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 07-090 (SLR)
)	
ALCATEL-LUCENT ENTERPRISE and)	REDACTED –
GENESYS TELECOMMUNICATIONS)	PUBLIC VERSION
LABORATORIES, INC.,)	
)	
Defendants.)	

**APPENDIX OF EXHIBITS TO DEFENDANTS
ALCATEL LUCENT ENTERPRISE AND GENESYS TELECOMMUNICATIONS
LABORATORIES' ANSWERING BRIEF IN OPPOSITION TO MICROSOFT'S
MOTION FOR SUMMARY JUDGMENT OF NO INEQUITABLE CONDUCT**

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*Attorneys for Defendants
Alcatel-Lucent Enterprise and
Genesys Telecommunications Laboratories,
Inc.*

Original Filing Date: June 20, 2008
Redacted Filing Date: June 27, 2008

Attached are copies of the exhibits that Defendant Alcatel Lucent Enterprise (“ALE”) and Genesys Telecommunications Laboratories (Genesys) offers in support of its Memorandum in Opposition to Microsoft’s Motion for Summary Judgment of No Inequitable Conduct:

1. Excerpts from the ’439 Patent Prosecution History
2. Excerpts from the ’289 Patent Prosecution History
3. U.S. Patent No. 6,430,289 (“the ’289 Patent”)
4. U.S. Patent No. 6,421,439 (“the ’439 Patent”)
5. Excerpts from ITC Complainant Microsoft Corporation’s Post-Hearing Brief
6. Microsoft Corporation’s Terminal Disclaimer of the ’289 Patent
7. Excerpts from Israelsen ITC Deposition Transcript
8. Excerpts from ITC Hearing Day 2 Transcript
9. Excerpts from Beckmann Opening Report
10. U.S. Patent No. 5,329,578 (“the Brennan Patent”)
11. Excerpts from ITC Complainant Microsoft Corporation’s Pre-Hearing Brief
12. ITC Complainant Microsoft Corporation’s Supplemental Responses to Respondent, ALE’s First Set of Interrogatories 2, 11, 20, 29

CERTIFICATE OF SERVICE

I, Jack B. Blumenfeld, hereby certify that on June 20, 2008 I electronically filed the foregoing document, which will send notification of such filing(s) to the following:

Thomas L. Halkowski, Esquire
FISH & RICHARDSON P.C.

I also certify that copies were caused to be served on June 20, 2008 upon the following in the manner indicated:

**BY ELECTRONIC MAIL
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Thomas L. Halkowski, Esquire
FISH & RICHARDSON P.C.,
919 N. Market Street
Suite 1100
Wilmington, DE 19801

BY ELECTRONIC MAIL

Ruffin B. Cordell, Esquire
Linda Liu Kordziel, Esquire
FISH & RICHARDSON P.C.
1425 K. Street, N.W.
11th Floor
Washington, DC 20005

John E. Gartman, Esquire
FISH & RICHARDSON P.C.
12390 EL Camino Real
San Diego, CA 92130

/s/ Jack B. Blumenfeld

Jack B. Blumenfeld (#1014)

CERTIFICATE OF SERVICE

I hereby certify that on June 27, 2008 I electronically filed the foregoing document, which will send notification of such filing(s) to the following:

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FISH & RICHARDSON P.C.

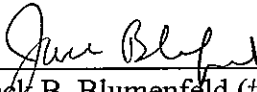
I also certify that copies were caused to be served on June 27, 2008 upon the following in the manner indicated:

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919 N. Market Street
Suite 1100
Wilmington, DE 19801

VIA ELECTRONIC MAIL

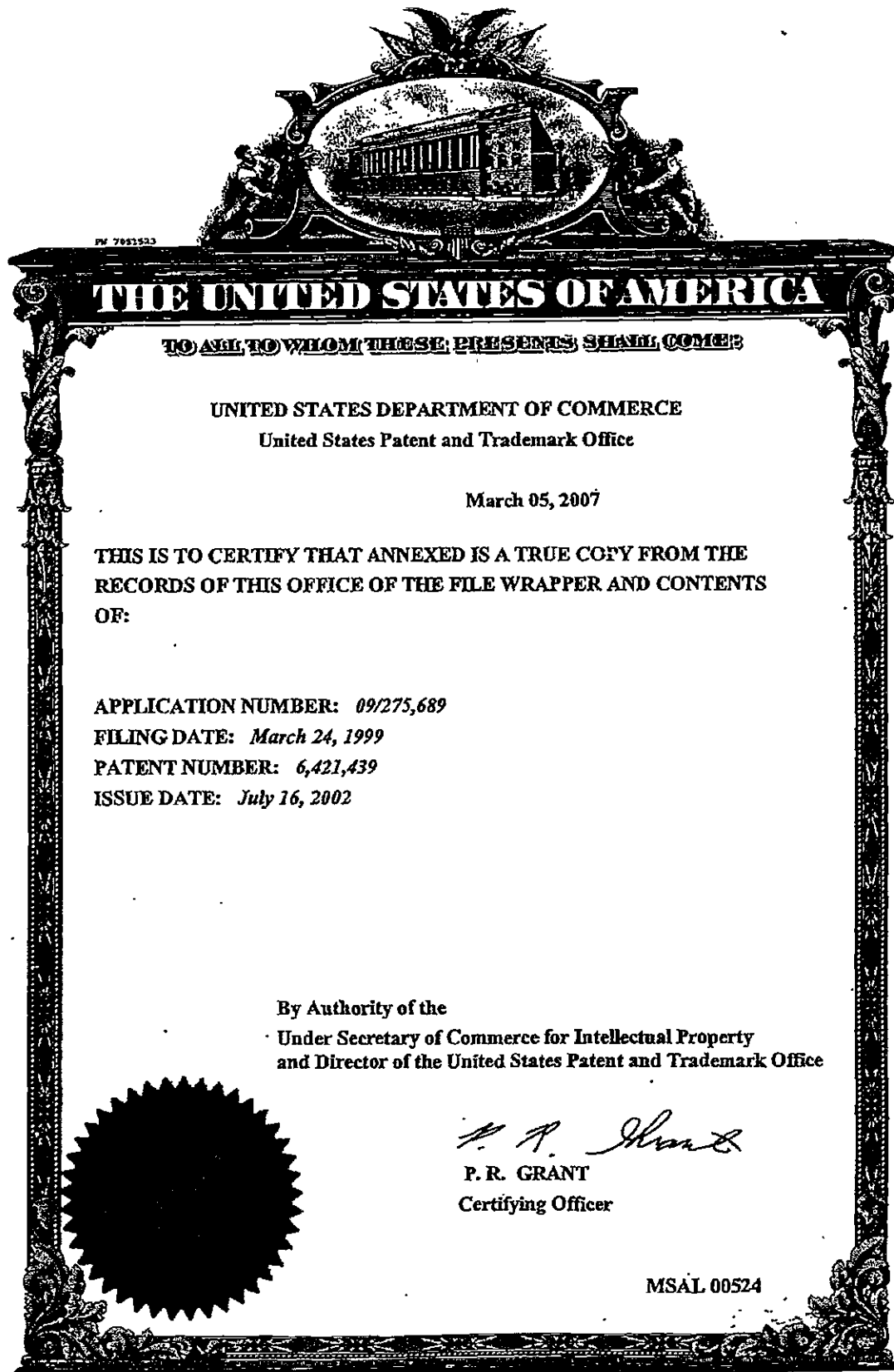
Ruffin B. Cordell, Esquire
Linda Liu Kordziel, Esquire
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1425 K. Street, N.W.
11th Floor
Washington, DC 20005



Jack B. Blumenfeld (#1014)


Exhibit

1



379	211.P2
Class	Subject

ISSUE CLASSIFICATION

PATENT NUMBER
6421439

6421439

② O.I.P.E. PD
SCANNED DAW Q.A. RG

PATENT DATE
JUL 16 2002

SECTOR	CLASS	SUBCLASS	ART UNIT	EXAMINER
	3702	127	274	Tier

211.02 2.5

FILED WITH: ☐ DISK (CRF) ☐ FICHE
(Attach in pocket on right inside flap)

Certificate
APR 06 2004
of Correction

ISSUING CLASSIFICATION						
ORIGINAL		CROSS REFERENCE(S)				
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)			
379	211.02	379	201.02			
INTERNATIONAL CLASSIFICATION		709	328			
H1C4M	3/42					
G06F	9/46					
	/					
	/					
	/					

☐ Confirmed on Issue Slip inside File Jacket

06/jn/02 PRC 2000 (08 sheet) 01 03/24/99

<input type="checkbox"/> TERMINAL DISCLAIMER	DRAWINGS Sheets Drwg. <u>8</u> Figs. Drwg. <u>8</u> Print Fig. <u>2</u>			CLAIMS ALLOWED Total Claims <u>51</u> Print Claim for O.G. <u>1</u>	
	<input type="checkbox"/> a) The term of this patent subsequent to _____ (date) has been disclaimed.			NOTICE OF ALLOWANCE MAILED <u>3/19/02</u>	
<input type="checkbox"/> b) The term of this patent shall not extend beyond the expiration date of U.S. Patent No. _____	<u>Arnold F. Mazar</u> ARNOLD F. MAZAR SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2F00 _____ (Primary Examiner) <u>3/21/02</u> (Date)			ISSUE FEE Amount Due <u>\$1,250</u> Date Paid <u>6/15/02 MC</u>	
	<input type="checkbox"/> c) The terminal _____ months of this patent have been disclaimed.			ISSUE BATCH NUMBER <u>Sheld Canell</u> <u>3/21/02</u> _____ (Legal Instruments Examiner) (Date)	

WARNING: The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form FTO-436A
(Rev. 8-78)

Formal drawings (sheets) set

(LABEL AREA) ISOTHE' DATE IN FILE

(FACE)

MSAL 00525

44

SERIAL NUMBER 09/275,689	FILING DATE 03/24/99	CLASS 379	GROUP ART UNIT 2742 2647	ATTORNEY DOCKET NO. 664005.454
APPLICANT STEPHEN MITCHELL LIFFICK, SEATTLE, WA.				
CONTINUING DOMESTIC DATA*** VERIFIED <i>Done 2/16</i>				
371 (NAT'L STAGE) DATA*** VERIFIED <i>Done 2/16</i>				
FOREIGN APPLICATIONS*** VERIFIED <i>Done 2/16</i>				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED 04/16/99				
Foreign Priority claimed 35 USC 119 (a-d) conditions met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Verified and Acknowledged <i>Done</i>		STATE OR COUNTRY WA	SHEETS DRAWING 8	TOTAL CLAIMS 51
				INDEPENDENT CLAIMS 4
ADDRESS MICHAEL J DONOHUE SEED AND BERRY 6300 COLUMBIA CENTER SEATTLE WA 98104-7092				
TITLE SYSTEM AND METHOD FOR USER AFFILIATION IN A TELEPHONE NETWORK				
FILING FEE RECEIVED \$1,396	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for the following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit _____	

MSAL 00526

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

04/05/1999 INLEXXX 00000036 09275689

01 FLS101	765.00 GP
02 FLS102	75.00 BP
03 FLS103	555.00 BP

PTO-1556
(5/87)

U.S. GPO: 1996-433-214/80404

MSAL 00527

A PTO/SB/05 (2/98)

03/24/99

U.S. PTO

Do not type a plus sign (+) inside this box

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No. 664005.4	First Inventor or Application Identifier Stephen Mitchell Liffick
Title SYSTEM AND METHOD FOR USER AFFILIATION TELEPHONE NETWORK	Express Mail Label No. EM150272273US

Box Patent Applicant:
Assistant Commissioner
Washington, D.C. 20222

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ General Authorization Form & Fee Transmittal
(Submit an original and a duplicate for fee processing)

2. ☒ Specification [Total Pages] **36**
(preferred arrangement set forth below)

- Descriptive Title of the Invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

3. ☒ Drawing(s) (35 USC 113) [Total Sheets] **8**

4. Oath or Declaration [Total Pages] **2**

- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)

5. ☐ Incorporation By Reference (useable if box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)

7. Nucleotide and Amino Acid Sequence Submission (if applicable, all necessary)

- a. ☐ Computer-Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☒ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney

10. ☐ English Translation Document (if applicable)

11. ☐ Information Disclosure Statement (IDS) (PTO-1449) ☐ Copies of IDS Citations

12. ☐ Preliminary Amendment

13. ☒ Return Receipt Postcard

14. ☐ Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. ☒ Other: Certificate of Express Mail
Check for \$1436

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information below and in a preliminary amendment

☐ Continuation ☐ Divisional ☐ Continuation-In-Part (CIP) of prior Application No.: _____

Prior application information: Examiner _____ Group / Art Unit _____

☐ Claims the benefit of Provisional Application No. _____

CORRESPONDENCE ADDRESS

Michael J. Donohue
Seed and Berry LLP
6300 Columbia Center, 701 Fifth Avenue
Seattle, Washington 98104-7092
(206) 622-4900 phone; (206) 682-6031 fax

Respectfully submitted,

TYPED or PRINTED NAME Michael J. DonohueREGISTRATION NO. 35,859

SIGNATURE

USShannonR11022

Date

March 24, 1999

MSAL 00528



Patent and Trademark **DEPARTMENT OF COMMERCE**
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/275,629 03/24/99 LIFFICK

S 664005.454

EXAMINER

WM01/0730

MICHAEL J DONOHUE
 SEED AND BERRY
 6300 COLUMBIA CENTER
 SEATTLE WA 98104-7092

TIELL R

ART UNIT

PAPER NUMBER

2642

DATE MAILED:

07/30/01

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/275,689	LIFFICK, STEPHEN MITCHELL	
	Examiner	Art Unit	
	Benny Q. Tieu	2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 24 March 1999.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-51 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-51 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

U.S. Patent and Trademark Office
PTO-326 (Rev. 04-01)

Office Action Summary

Part of Paper No. 2

MSAL 00587

Application/Control Number: 09/275,689
Art Unit: 2642

Page 2

DETAILED ACTION

Claim Objections

1. Claim 34 is objected to because of the following informalities: claim 34 depends from claim 35 which depends from claim 34. Appropriate correction is required. For examination purpose, it is assumed that claim 34 depends from claim 28.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-13, 15-25, 27-40, and 42-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Brennan (U.S. Patent No. 5,329,578).

Regarding claims 1, 21, 28, and 38, Brennan teaches a system, method, and a computer readable medium for user specification of call processing in a telephone network having a user telephone (Fig. 1, 15-17) coupled to the telephone network (Fig. 1, 12), the system comprising: a data structure contained within a computer network (Fig. 1b, 10) to store user selectable criteria for call processing (Fig. 1b, 24); a computer network access port used by the telephone network to access the data structure (Fig. 1c); and a controller (Fig. 1c, 48) to receive an incoming call designated for the user telephone 15-17 and to process the incoming call in accordance with the

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Art Unit: 2642

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user-selectable criteria (column 3, line 54 through column 4, line 18), the controller accessing the data structure via the computer network access port and thereby applying the user-selectable criteria to the incoming call (column 4, lines 19-35).

Regarding claims 2, 31, and 43, Brennan further teaches the system wherein the data structure stores the user selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, the controller using the identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data (column 5, lines 23-46).

Regarding claim 3, Brennan further teaches the system wherein the identification data is telephone automatic number identification data (column 3, lines 62-68).

Regarding claims 5, 22, 32, and 44, Brennan further teaches the system wherein the user-selectable criteria indicates permission to process the incoming call (Table 1.0), the controller processing the incoming call in accordance with the permission to generate a ring signal at the user telephone (column 5, lines 60-68).

Regarding claims 6, 23, 33, and 45, Brennan further teaches the system wherein the user-selectable criteria indicates no permission to process the incoming call, the controller blocking the incoming call and not generating a ring signal at the user telephone (when the caller is directed to voice mail, the user telephone will not be rung).

Regarding claims 7, 19, 34, and 46, Brennan further teaches the system wherein the controller blocking the incoming call generates a busy signal at an origination telephone from which the incoming call is originated (column 4, lines 11-18).

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Art Unit: 2642

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Regarding claim 8, Brennan further teaches the system comprising an outgoing message system having an outgoing message, the controller blocking the incoming call and playing the outgoing message at an origination telephone from which the incoming call is originated (column 10, lines 23-47).

Regarding claims 9, 24, 36, and 48, Brennan further teaches the system wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, the controller processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone, the controller blocking the incoming call and not generating a ring signal at the user telephone during a time period other than the user-selected time period (column 6, lines 46-68).

Regarding claims 10, 35, and 47, Brennan further teaches the system comprising an outgoing message system storing a plurality of outgoing messages, the controller selecting one of the plurality of outgoing messages wherein the outgoing message system plays the selected outgoing message at an origination telephone from which the incoming call is originated (column 10, lines 34-37).

Regarding claim 11, Brennan further teaches the system wherein the incoming call arrives at a particular time other than the user-selected time period, the controller selecting the selected outgoing message based on the particular time of arrival of the incoming call (column 9, lines 3-38).

Regarding claims 12, 25, Brennan further teaches the system comprising a data editor to permit user entry and editing of the user-selectable criteria into the data structure (column 13, lines 4-16).

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Regarding claim 20, see column 6, lines 46-68.

Regarding claims 27 and 42, Brennan further teaches the system wherein the telephone network is a public switched telephone network (Fig. 1, 12).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 14, 26, and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Brennan as applied to claims 1, 21, and 38 above in view of Leung et al. (U.S. Patent No. 6,005,870).

Regarding claim 4, Brennan fails to teach the system wherein the identification data is electronic mail identification data. However, this feature is well known in the art. For example, Leung teaches a method for called party control of telecommunications network services wherein the calling identification data includes e-mail address (column 6, lines 46-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of e-mail address data as an identification data as taught by Leung into the system disclosed by Brennan in order to provide further enhancements to provide called party control of new services.

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Art Unit: 2642

Regarding claims 14, 26, and 41, Brennan fails to teach the system wherein the computer network is the Internet. However, Leung teaches that the system and method for called party control of telecommunications network services is further applied in an Internet environment (column 4, lines 18-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Internet as taught by Leung into the method and system disclosed by Brennan in order to provide the called party more powerful in creating or modifying the called party's profile.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brewster et al. (Patent No. 6,041,108) teaches a method and apparatus for intelligent network call handling in a telephone exchange.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or: Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benny Q. Tieu whose telephone number is (703) 305-2360. The examiner can normally be reached on Monday-Friday: 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (703) 305-4731. The fax phone numbers for the

MSAL 00592

Application/Control Number: 09/275,689

Page 8

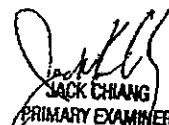
Art Unit: 2642

organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Benny Q. Tieu
Examiner
Art Unit 2642

BQT
July 23, 2001


JACK CHIANG
PRIMARY EXAMINER

MSAL 00593



UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/175,639	03/24/99	LIFFICK	S 664005,454

MICHAEL J DONOHUE
 SEED AND BERRY
 6300 COLUMBIA CENTER
 SEATTLE WA 98104-7092

TN02/1018

EXAMINER

TIEU, B

ART UNIT	PAPER NUMBER
2642	3

DATE MAILED: 10/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-D0C (Rev.11/00)

1- File Copy

MSAL 00677

Interview Summary	Application No. 09/275,689	Applicant(s) LIFFICK, STEPHEN MITCHELL	
	Examiner	Art Unit	
	Benny Q. Tieu	2642	

All participants (applicant, applicant's representative, PTO personnel):

(1) Benny Q. Tieu (3) R. Burns Israelson

(2) Carl Reed (4) _____

Date of Interview: 17 October 2001.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____

Claim(s) discussed: 1, 21, 28 & 38

Identification of prior art discussed: Brennan (5329578)

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _____

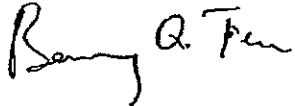
(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

☒ It is not necessary for applicant to provide a separate record of the substance of the interview (if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Applicant's representative proposed amended claims 1 and 38.

Examiner agreed that proposed amended claims overcome the art of Brennan.



Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

01.02.02

2642 #4

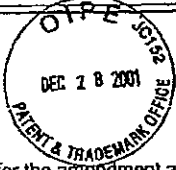
5/16/02

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Large Entity)			Docket No. 13768.67.19		
In Re Application Of: Stephen Mitchell Liffick					
Serial No. 09/275,689	Patent & Trademark Office Date March 24, 1999	Examiner Tieu, Benny Q.	Group Art Unit 2642		
Invention: SYSTEM AND METHOD FOR USER AFFILIATION IN A TELEPHONE NETWORK					
RECEIVED JAN 04 2002 Technology Center 2600					
<u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u>					
This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of <u>July 30, 2001</u> in the above-identified application. <i>Date</i>					
The requested extension is as follows (check time period desired): <input type="checkbox"/> One month <input checked="" type="checkbox"/> Two months <input type="checkbox"/> Three months <input type="checkbox"/> Four months <input type="checkbox"/> Five months from: <u>October 30, 2001</u> until: <u>December 30, 2001</u> <i>Date</i> <i>Date</i>					
The fee for the amendment and extension of time has been calculated as shown below:					
CLAIMS AS AMENDED					
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	51	51	0	x \$18.00	\$0.00
INDEP. CLAIMS	4	4	0	x \$84.00	\$0.00
FEE FOR AMENDMENT					\$0.00
FEE FOR EXTENSION OF TIME					\$400.00
TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME					\$400.00
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MSAL 00679

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Large Entity)	Docket No. 13768.67.19
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The fee for the amendment and extension of time is to be paid as follows:

☒ PTO-2038 Credit Card Payment Form \$400.00 for the amendment and extension of time is enclosed.


☐ Please charge Deposit Account No. _____ in the amount of _____
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 23-3178
A duplicate copy of this sheet is enclosed.

☒ Any additional filing fees required under 37 C.F.R. 1.16.

☒ Any patent application processing fees under 37 CFR 1.17.


☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. 23-3178 A duplicate copy of this sheet is enclosed.



Signature

Carl T. Reed
Attorney for Applicant
Registration No.: 45,454

Dated: December 28, 2001



022913

PATENT TRADEMARK OFFICE

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I certify that this document and fee is being deposited on _____ with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

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P28JARGEREV03

MSAL 00680

Please type a plus sign (+) inside this box ☐

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Total Number of Pages in This Submission

32

Application 09/275,689

Filing Date March 14, 1999

First Named Stephen Mitchell Liffie

Group Art Unit 2642

Examiner Name Tieu, Benny Q.

Attorney Docket Number 13768.67.19

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ENCLOSURES (check all that apply)

☐ Fee Transmittal Form☐ Fee Attached☒ Amendment / Response☐ After Final☐ Affidavits/Declaration(s)☒ Extension of Time Request☐ Express Abandonment Request☐ Information Disclosure Statement☐ Certified Copy of Priority Document(s)☐ Response to Missing Parts Incomplete Application☐ Response to Missing Parts under 37 CFR 1.52 or 1.53☐ Assignment Papers (for an Application)☐ Drawing(s)☐ Licensing-related Papers☐ Petition☐ Petition to Convert a Provisional Application☐ Power of Attorney, Revocation Change of Correspondence☐ Terminal Disclaimer☐ Request for Refund☐ CD, Number of CD(s)☐ After Allowance Communication to Group☐ Appeal Communication to Board of Appeals and Interferences☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)☐ Proprietary Information☐ Status Letter☒ Other Enclosure(s) (please identify below):

- Postcard
- Form PTO-2038 in the amount of \$400.00

Remarks



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PATENT TRADEMARK OFFICE

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

Carl T. Reed
WORKMAN, NYDEGGER & SEELEY

Signature

Date

December 28, 2001

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date:

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Lisa L. Rogers

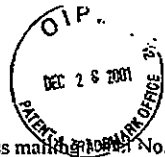
Signature

Date

December 28, 2001

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MSAL 00681



Express mailing No. EL 795 866 772 US

PATENT APPLICATION
Docket No. 13768.67.19

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	Stephen Mitchell Liffick)	
Serial No.:	09/275,689)	Art Unit
Confirmation No.:	unknown)	2642
Filed:	March 24, 1999)	RECEIVED
For:	SYSTEM AND METHOD FOR USER AFFILIATION IN A TELEPHONE NETWORK)	JAN 04 2002
Examiner:	Benny Q. Tieu)	Technology Center 2600

Box RESPONSES
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

Responsive to the Office Action dated July 30, 2001 (Paper No. 2), Applicant respectfully requests entry of the following amendments and reconsideration of the pending claims in view of the matters discussed at the Examiner Interview of October 17, 2001, and the further remarks herein.

AMENDMENT "A" AND REMARKS

In the Claims:

Please amend claims 1, 8, 15, 17-18, 21, 28-39, 43-45, and 48-51 as follows:

X

AI

1. (Amended) In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a system for processing an incoming call from a subscriber to a user in the telephone network according to user specifications, the system comprising:

a data structure contained within a computer network to store user-selectable criteria for call processing, wherein the data structure stores the user-selectable criteria in one or more lists that are used in filtering an incoming call and wherein some of the one or more lists are used to filter the incoming call according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the one or more lists over the computer network access port; and

a controller to receive the incoming call designated for the user telephone and to process the incoming call in accordance with the user-selectable criteria, the controller accessing the user-selectable criteria in the one or more lists of the data structure via the computer network access port and thereby applying the user-selectable criteria to the incoming call.

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8. (Amended) The system of claim 6, further comprising an outgoing message system having an outgoing message, the controller blocking the incoming call and playing the outgoing message at an origination telephone.

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15. (Amended) The system of claim 1 wherein each of the one or more lists of the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the controller using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

A4

17. (Amended) The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls, the controller processing the incoming call and signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

18. (Amended) The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, the controller blocking processing of the incoming call if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

AS

21. (Amended) In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a system for user specification of call processing in the telephone network, the system comprising:

a data structure contained within a computer network and accessible by the telephone network, the data structure containing a plurality of caller lists each having associated user-selectable criteria for call processing, wherein some of the plurality of caller lists are conditioned according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the plurality of caller lists; and

a controller on the telephone network to receive an incoming call having origination data indicative of a subscriber and destination data indicating the call is designated for the user telephone, the controller accessing the plurality of caller lists in the data structure via the computer network access port to determine which of the plurality of caller lists contains the origination data, the controller processing the incoming call in accordance with the user-selectable criteria associated with the caller list containing the origination data.

A6

28. (Amended) In a system where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a computer program product for implementing a method for processing a call from a subscriber to a user over a telephone network, the computer program product comprising:

a computer readable medium having computer executable instructions for performing the method, the method comprising:

accepting an incoming call designated for the user telephone;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call in accordance with the user-selectable criteria.

29. (Amended) The computer program product of claim 28, further comprising:
generating call processing rules based on the user-selectable criteria; and
storing the call processing rules on the computer network in association with a caller list.

30. (Amended) The computer program product of claim 29 wherein generating call processing rules is performed on a computer coupled to the computer network.

37

X

31. (Amended) The computer program product of claim 28 wherein the data structures store the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, the method further comprising accessing the data structure using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

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cont.

32. (Amended) The computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call, the method comprising:

processing the incoming call comprising establishing a link with the user telephone; and
generating a ring signal at the user telephone.

✓ 33. (Amended) The computer program product of claim 28 wherein the user-selectable criteria indicates no permission to process the incoming call, the method further comprising
processing the incoming call comprising blocking the incoming call; and
not generating a ring signal at the user telephone.

34. (Amended) The computer program product of claim 33, further comprising generating a busy signal at an origination telephone from which the incoming call is originated.

35. (Amended) The computer program product of claim 34, further comprising playing an outgoing message at an origination telephone from which the incoming call is originated, the outgoing message indicating that the incoming call will not be connected to the user telephone.

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Amended

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36. (Amended) The computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, the method further comprising:

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone; and

blocking the incoming call and not generating a ring signal at the user telephone during time periods other than the user-selected time period.

37. (Amended) The computer program product of claim 28 wherein the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the method further comprising:

accessing the data structure using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data; and

processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

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MSAL 00689

38. (Amended) In a system including a telephone network and a computer network where an originating telephone connects with a user telephone over the telephone network, a method for processing a call from the originating telephone to the user telephone according to user specifications, the method comprising:

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amdt.
accepting an incoming call designated for the user telephone from an originating telephone of a subscriber;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call of the subscriber in accordance with the user-selectable criteria.

39. (Amended) The method of claim 38, further comprising generating call processing rules based on the user-selectable criteria and storing the call processing rules on the computer network in association with a caller list that is associated with the data structure.

A7
43. (Amended) The method of claim 38 wherein the data structure stores the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, wherein accessing a data structure further comprises using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

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ent.

44. (Amended) The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call, wherein processing the incoming call further comprises establishing a link with the user telephone and generating a ring signal at the user telephone.

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cancel

45. (Amended) The method of claim 38 wherein the user-selectable criteria indicates no permission to process the incoming call, wherein processing the incoming call further comprises blocking the incoming call and not generating a ring signal at the user telephone.

A8

48. (Amended) The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, wherein [the] processing the incoming call further comprises:

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone;

blocking the incoming call; and

not generating a ring signal at the user telephone during time periods other than the user-selected time period.

49. (Amended) The method of claim 38 wherein the data structure comprises a plurality of data substructures each storing caller identification and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, wherein accessing the data structure further comprises using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

50. (Amended) The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls, wherein processing the incoming call further comprises signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

51. (Amended) The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, wherein processing the incoming call further comprises not establishing a communication link with the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

REMARKS

Applicants and applicants' attorney express appreciation to the Examiner for the courtesies extended during the recent interview held on October 17, 2001. The claim amendments made by this paper are consistent with the proposals discussed, and the agreements reached, during the interview.

The Office Action of July 30, 2001, rejected claims 1-3, 5-13, 15-25, 27-40, and 42-51 under 35 § 102(b) as being anticipated by U.S. Patent No. 5,329,578 to Brennan. The Office Action also rejected claims 4, 14, 26, and 41 as being unpatentable over Brennan in view of U.S. Patent No. 6,005,870 to Leung.

The communication services taught by Brennan are illustrated, for example, by Figures 2a-2g and by Figures 3a-3e. Figures 2a-2g describe the flow of information at the caller interface when an individual is calling a user and describe what happens to an incoming call of the caller. Figures 3a-3e describe a user service interface illustrating how a menu is accessed by a user and how a user is able to change or set the user specifications that determine how an incoming call is processed. With regard to Figures 2a-2g, Brennan teaches that the flow of information is fixed and is not dependent on any particular status or activity of the user or of the caller and that the flow of information is determined by the user's requirements for that particular caller.

For example, Brennan teaches that if the incoming call includes calling line identification (CLID), then the profile of the user or subscriber is accessed to determine whether the CLID matches one of the CLIDs of the callers on the user's caller list, which determines how to treat the incoming call. See Brennan col. 11, lines 40-45. If the CLID of the caller is present in the caller list, then the special treatment, as indicated in the caller list for that caller, is taken.

Otherwise, the default treatment of an incoming call is assumed in this example. Thus, the treatment of an incoming call is dependent on a caller list that does not change. More specifically, actions or activity of callers on a telephone network or on a computer network have no effect on the caller list or on other user requirements for callers.

This is evident in Brennan, where a user is required to call a special number in order to access and/or alter the user requirements for different callers. *See* Brennan col. 13, lines 7-15. This is plainly illustrated in Figure 3a, where the user is able to access and change the caller lists and user requirements over the telephone network. Thus, Brennan teaches that the user requirements or the caller lists do not change unless the user expressly changes the user requirements, or unless the user specifically requests a system operator to make the changes to the user requirements. *See* Brennan col. 13, lines 14-16.

In contrast to Brennan, claim 1 as amended recites that the one or more lists used in filtering an incoming call change according to current activity of the subscribers (e.g., persons making the calls), or according to current activity of the user (e.g., intended recipient of the call). In one example, the current activity of the subscriber and/or the user does not typically occur on the telephone network. Instead the current activity of the subscriber and/or the user usually occurs on a computer network. The ability to process an incoming call on a telephone network according to activity on a computer network is not taught or suggested by Brennan.

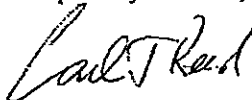
For at least these reasons and for the reasons discussed at the interview, Brennan does not teach or anticipate claim 1 as amended and claim 1 is believed to be in condition for allowance. For similar reasons, the other independent claims, namely claims 21, 28, and 38, are not taught or anticipated by Brennan and are in condition for allowance. The remaining dependent claims,

which depend from one of the independent claims, are in condition for allowance for similar reasons.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 28 day of December, 2001.

Respectfully submitted,



CARL T. REED
Attorney for Applicant
Registration No. 45,454

022913

PATENT TRADEMARK OFFICE

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VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

In the claims:

I. (Amended) In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a [A] system for processing an incoming call from a subscriber to a user in the telephone network according to user specifications [user specification of call processing in a telephone network having a user telephone coupled to the telephone network], the system comprising:

a data structure contained within a computer network to store user-selectable criteria for call processing, wherein the data structure stores the user-selectable criteria in one or more lists that are used in filtering an incoming call and wherein some of the one or more lists are used to filter the incoming call according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the one or more lists over the computer network access port; and

a controller to receive [an] the incoming call designated for the user telephone and to process the incoming call in accordance with the user-selectable criteria, the controller accessing the user-selectable criteria in the one or more lists of the data structure via the computer network access port and thereby applying the user-selectable criteria to the incoming call.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

8. (Amended) The system of claim 6, further comprising an outgoing message system having an outgoing message, the controller blocking the incoming call and playing the outgoing message at an origination telephone [from which the incoming call is originated].

15. (Amended) The system of claim 1 wherein [the] each of the one or more lists of the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the controller using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

17. (Amended) The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls, the controller processing the incoming call and signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

18. (Amended) The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, the controller blocking processing of the incoming call if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

21. (Amended) In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a [A] system for user specification of call processing in [a] the telephone network [having a user telephone coupled to the telephone network], the system comprising:

a data structure contained within a computer network and accessible by the telephone network, the data structure containing a plurality of caller lists each having associated user-selectable criteria for call processing, wherein some of the plurality of caller lists are conditioned according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the plurality of caller lists; and

a controller on the telephone network to receive an incoming call having origination data indicative of a [caller] subscriber and destination data indicating the call is designated for the user telephone, the controller accessing the plurality of caller lists in the data structure via the computer network access port to determine which of the plurality of caller lists contains the origination data, the controller processing the incoming call in accordance with the user-selectable criteria associated with the caller list containing the origination data.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

28. (Amended) In a system where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a computer program product [A computer-readable medium containing computer-executable instructions] for [implementing a method for processing a call from a subscriber to a user over [call processing in] a telephone network [having a user telephone coupled to the telephone network by performing the steps of], the computer program product comprising:

a computer readable medium having computer executable instructions for performing the method, the method comprising:

accepting an incoming call designated for the user telephone;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call in accordance with the user-selectable criteria.

29. (Amended) The [computer-readable medium] computer program product of claim 28, further comprising: [computer-executable instructions for performing the steps of]

generating call processing rules based on the user-selectable criteria; and

storing the call processing rules on the computer network in association with a caller list.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

30. (Amended) The [computer-readable medium] computer program product of claim 29 wherein [the computer-executable instructions for] generating call processing rules [are] is performed on a computer coupled to the computer network.

31. (Amended) The [computer-readable medium] computer program product of claim 28 wherein the data structures store[s] the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, [the computer-readable medium containing computer-executable instructions for performing the steps] the method further comprising accessing [of] the data structure using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

32. (Amended) The [computer-readable medium] computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call, the [computer-readable medium containing computer-executable instructions for performing the steps of] method comprising:

processing the incoming call comprising establishing a link with the user telephone; and
generating a ring signal at the user telephone.

33. (Amended) The [computer-readable medium] computer program product of claim 28 wherein the user-selectable criteria indicates no permission to process the incoming call, the [computer-readable medium containing computer-executable instructions for performing the steps of] method further comprising

processing the incoming call comprising blocking the incoming call; and
not generating a ring signal at the user telephone.

34. (Amended) The [computer-readable medium] computer program product of claim [35] 33, further comprising [computer-executable instructions for performing the step of] generating a busy signal at an origination telephone from which the incoming call is originated.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

35. (Amended) The [computer-readable medium] computer program product of claim 34, further comprising [computer-executable instructions for performing the steps] playing an outgoing message at an origination telephone from which the incoming call is originated, the outgoing message indicating that the incoming call will not be connected to the user telephone.

36. (Amended) The [computer-readable medium] computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, the [computer-readable medium containing computer-executable instructions for performing the steps of] method further comprising:

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone[,]; and

blocking the incoming call and not generating a ring signal at the user telephone during time periods other than the user-selected time period.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

37. (Amended) The [computer-readable medium] computer program product of claim 28 wherein the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the [computer-readable medium containing computer-executable instructions for performing the steps for] method further comprising:

accessing the data structure using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data; and [the]

processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

38. (Amended) In a system including a telephone network and a computer network where an originating telephone connects with a user telephone over the telephone network, a [A] method for processing a call from the originating telephone to the user telephone according to user specifications, [user specification of call processing in a telephone network having a user telephone coupled to the telephone network,] the method comprising:

accepting an incoming call designated for the user telephone from an originating telephone of a subscriber;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call of the subscriber in accordance with the user-selectable criteria.

39. (Amended) The method of claim 38, further comprising generating call processing rules based on the user-selectable criteria and storing the call processing rules on the computer network in association with a caller list that is associated with the data structure.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

43. (Amended) The method of claim 38 wherein the data structure stores the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, wherein accessing a data structure further comprises [the access of the data structure] using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

44. (Amended) The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call, [the] wherein processing the incoming call further comprises [comprising] establishing a link with the user telephone and generating a ring signal at the user telephone.

45. (Amended) The method of claim 38 wherein the user-selectable criteria indicates no permission to process the incoming call, wherein [the] processing the incoming call further comprises [comprising] blocking the incoming call and not generating a ring signal at the user telephone.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

48. (Amended) The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, wherein [the] processing the incoming call further comprises: [comprising]

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone[,]; [and]

blocking the incoming call; and

not generating a ring signal at the user telephone during time periods other than the user-selected time period.

49. (Amended) The method of claim 38 wherein the data structure comprises a plurality of data substructures each storing caller identification and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, wherein [the] accessing the data structure further comprises using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and [the] processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

VERSION WITH MARKINGS TO CHANGES MADE
(13768.67.19)

50. (Amended) The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls, wherein [the] processing the incoming call further comprises [comprising] signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

51. (Amended) The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, wherein [the] processing the incoming call further comprises [comprising] not establishing a communication link with the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

Notice of Allowability	Application No.	Applicant(s)	
	09/275,689	LIFFICK, STEPHEN MITCHELL	
	Examiner	Art Unit	
	Benny Q. Tieu	2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/28/01.
2. ☒ The allowed claim(s) is/are 1-51.
3. ☒ The drawings filed on 24 March 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted above. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

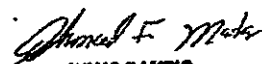
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

<input type="checkbox"/> Notice of References Cited (PTO-892) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	<input type="checkbox"/> Notice of Informal Patent Application (PTO-152) <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ <input type="checkbox"/> Examiner's Amendment/Comment <input type="checkbox"/> Examiner's Statement of Reasons for Allowance <input type="checkbox"/> Other
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BENNY Q. TIEU
PATENT EXAMINER
(703)305-2360



AHMAD F. MATAR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700

U.S. Patent and Trademark Office
PTO-37 (Rev. 04-01)

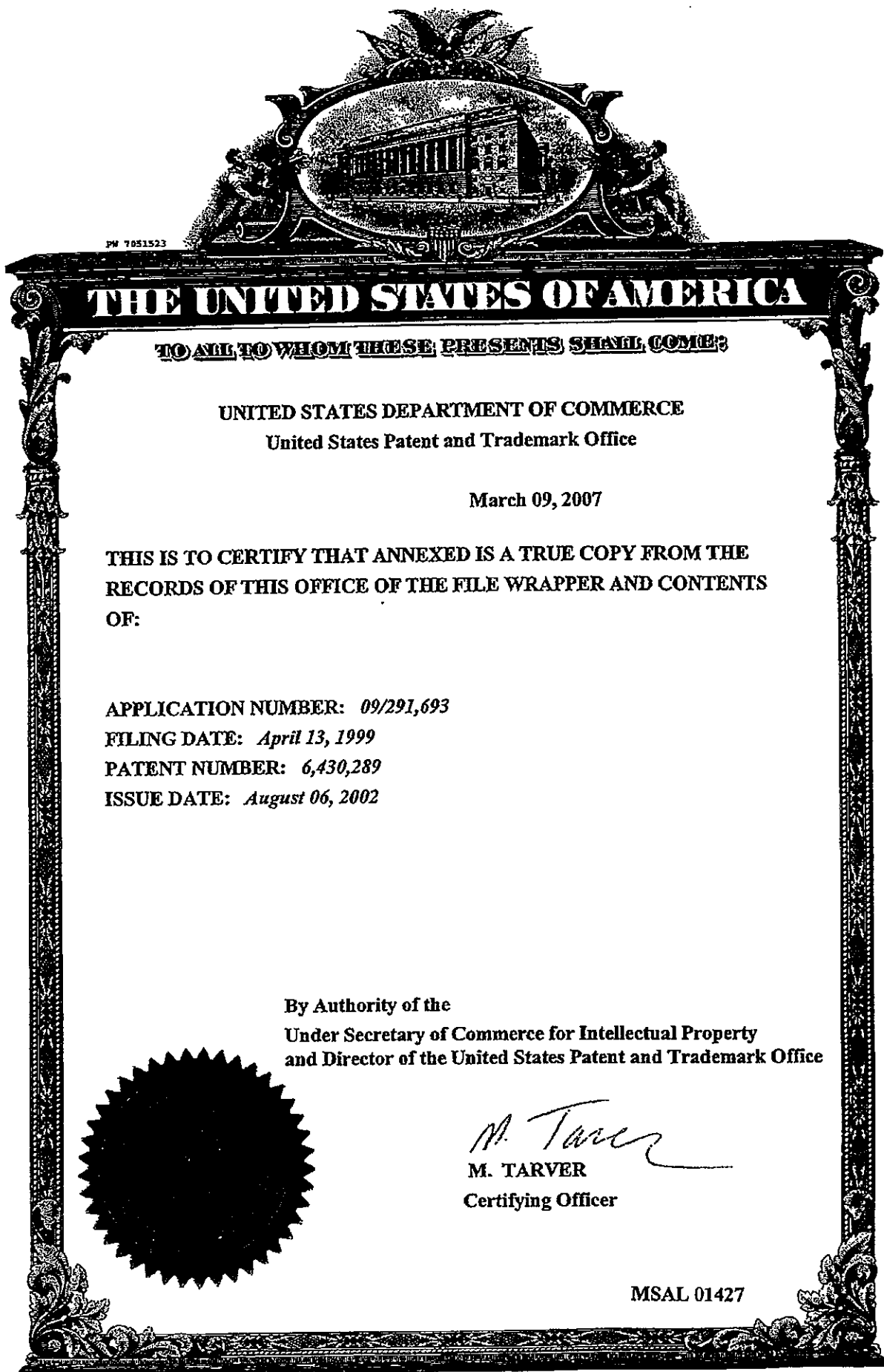
Notice of Allowability

Part of Paper No. 9.

MSAL 00722

Exhibit

2



JCS42 U.S. PTO

09/29/93

04/13/99

Class	Subclass	ISSUE CLASSIFICATION
379	900	

U.S. UTILITY PATENT APPLICATION

O.I.P.E. SCANNED <i>M2</i> <i>5/11/02</i> O.A. <i>KUB</i>	PATENT DATE AUG 06 2002
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PATENT NUMBER

6430289

6430289

SECTOR	CLASS 379	SUBCLASS 900	ART UNIT 2743	EXAMINER Smith
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FILED WITH: ☐ DISK (CRF) ☐ FICHE
(Attached in pocket on right inside flap)

PREPARED AND APPROVED FOR ISSUE

ISSUING CLASSIFICATION

ORIGINAL		CROSS REFERENCE(S)			
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)		
379	900	379	14215		
INTERNATIONAL CLASSIFICATION		379	352		
404M	1100				

☐ Continued on Issue Slip Inside File Jacket

<input type="checkbox"/> TERMINAL DISCLAIMER <input type="checkbox"/> a) The term of this patent subsequent to _____ (date) has been disclaimed. <input type="checkbox"/> b) The term of this patent shall not extend beyond the expiration date of U.S. Patent No. _____ <input type="checkbox"/> c) The term of this patent have been disclaimed.	DRAWINGS Sheets Drwg. <i>10</i> Figs. Drwg. <i>10</i> Print Fig. <i>4</i>			CLAIMS ALLOWED Total Claims <i>20</i> Print Claim for O.G. <i>1</i>	
	(Assistant Examiner) <i>Craig Smith</i> (Date) _____ Craig Smith Primary Examiner (Primary Examiner) _____ (Date) _____			NOTICE OF ALLOWANCE MAILED <i>32602</i> ISSUE FEE <i>(W)</i> Amount Due <i>32800</i> Date Paid <i>6-12-02</i> ISSUE BATCH NUMBER	
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SERIAL NUMBER 09/291,693	FILING DATE 04/13/99	CLASS 379	GROUP ART UNIT 2742	ATTORNEY DOCKET NO. 664005.455
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APPLICANT	STEPHEN MITCHELL LIFFICK, SEATTLE, WA.					
	<p align="center">**CONTINUING DOMESTIC DATA*****</p> <p>VERIFIED <u>CS</u> No</p>					
	<p align="center">**371 (NAT'L STAGE) DATA*****</p> <p>VERIFIED <u>CS</u> No</p>					
	<p align="center">**FOREIGN APPLICATIONS*****</p> <p>VERIFIED <u>CS</u> No</p>					
IF REQUIRED, FOREIGN FILING LICENSE GRANTED 04/30/99						
ADDRESS	Foreign Priority claimed 35 USC 119 (a-d) conditions met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Met after Allowance		STATE OR COUNTRY WA	SHEETS DRAWING 10	TOTAL CLAIMS 58	INDEPENDENT CLAIMS 4
	Verified and Acknowledged <u>CS</u> EXAMINER'S INITIALS INITIALS					
TITLE	SEED AND BERRY LLP 6300 COLUMBIA CENTER SEATTLE WA 98104-7092					
	SYSTEM AND METHOD FOR COMPUTERIZED STATUS MONITOR AND USE IN A TELEPHONE NETWORK					
FILING FEE RECEIVED \$1,522	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT; NO. _____ for the following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit MSAL 01429			

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

04/21/1999 XMRRLNG 00000057 09291693

01 FC:101	750.00 DP
02 FC:102	75.00 DP
03 FC:103	684.00 DP

PTO-1556
(5/87)

U.S. GPO: 1988-433-214/80404

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PTO/SB/05 (2/98)

**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for nonprovisional applications under 37 CFR § 1.53(b))

10520 U.S. PTO

Attorney Docket No. **664005.455**

First Inventor or Application Identifier **Stephen Mitchell Liffick**

Title **SYSTEM AND METHOD FOR COMPUTERIZED STATUS MONITOR AND USE IN A TELEPHONE NETWORK**

Express Mail Label No. **EM330174913US**

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Box Patent Application Assistant Commissioner for Patents
Washington, D.C. 20231

1. ☒ General Authorization Form & Fee Transmittal
(Submit an original and a duplicate for fee processing)

2. ☒ Specification [Total Pages] **46**
(preferred arrangement set forth below)

- Descriptive Title of the Invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

☒ Drawing(s) (35 USC 113) [Total Sheets] **10**

Oath or Declaration [Total Pages] **2**

a. ☒ Newly executed (original or copy)

b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)

i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)

5. ☐ Incorporation By Reference (useable if box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)

7. ☐ Nucleotide and Amino Acid Sequence Submission (if applicable, all necessary)

a. ☐ Computer-Readable Copy

b. ☐ Paper Copy (identical to computer copy)

c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☒ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney

10. ☐ English Translation Document (if applicable)

11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations

12. ☐ Preliminary Amendment

13. ☒ Return Receipt Postcard

14. ☐ Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. ☒ Other: Certificate of Express Mail
Check

17. **If a CONTINUING APPLICATION, check appropriate box and supply the requisite information below and in a preliminary amendment**

☐ Continuation ☐ Divisional ☐ Continuation-In-Part (CIP) of prior Application No.: _____

Prior application information: Examiner _____ Group / Art Unit _____

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Respectfully submitted,

TYPED or PRINTED NAME Michael J. DonohueREGISTRATION NO. 35,859SIGNATURE Michael J. DonohueDate April 13, 1999

user/float/wendy/0400

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CLAIMS

What is claimed is:

1. A system for telephone call processing in a telephone network using an independent computer network, the system comprising:

an originating telephone associated with a caller and coupled to the telephone network;

a destination telephone associated with a callee and coupled to the telephone network;

a call processor coupled to the telephone network and the computer network to determine a callee status based on callee status data from the computer network and to determine a caller status based on caller status data from the computer network; and

a call generation controller to generate control signals on the telephone network to thereby initiate a telephone call to the originating telephone in response to the caller status data indicating that the caller is available to receive the telephone call and to initiate a telephone call to the destination telephone in response to the callee status data indicating that the callee is available to receive the telephone call.

2. The system of claim 1, further comprising a callee computing platform associated with the destination telephone and coupled to the computer network wherein the callee computing platform has an associated status based on user activity on the callee computing platform, the callee status data comprising the callee computing platform status.

3. The system of claim 2 wherein the callee computing platform includes a coordinate control input device and the call processor determines callee computing platform status by detecting user activation of the coordinate control device,

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the callee computing platform status indicating the callee computing platform activity and callee availability to receive the telephone call.

4. The system of claim 2 wherein the callee computing platform includes a keyboard and the call processor determines callee computing platform status by detecting user activation of the keyboard, the callee computing platform status indicating the callee computing platform activity and callee availability to receive the telephone call.

5. The system of claim 1, further comprising a callee computing platform associated with the destination telephone and coupled to the computer network, wherein the callee computing platform executes computerized scheduling software to generate a callee schedule, the call processor determining callee status data based on the callee schedule.

6. The system of claim 5 wherein the callee computing platform stores data related to the callee schedule on the computer network, the call processor accessing the computer network to retrieve the data related to the callee schedule.

7. The system of claim 5 wherein the callee computing platform stores data related to the callee schedule on the computer platform, the call processor accessing the callee computing platform via the computer network to retrieve the data related to the callee schedule.

8. The system of claim 1 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call and is stored in a callee data structure on the computer network, the call processor accessing the callee data structure to retrieve the callee-generated status data, the call generation controller

generating control signals on the telephone network to initiate the telephone call to the destination telephone only if the callee-generated status data indicates that the callee is available to receive the telephone call.

9. The system of claim 8 wherein the callee-generated status data is stored in the data structure in association with caller identification data and the telephone call includes origination identification data associated therewith, the call processor using the origination identification data to identify the callee-generated status data stored in the callee data structure in association with the caller identification data and generating control signals on the telephone network to initiate the telephone call to the destination telephone only if the callee-generated status data stored in association with the caller identification data indicates that the callee is available to receive the telephone call.

10. The system of claim 8 wherein the callee-generated status data is based on time of day, the call generation controller generating control signals to initiate the telephone call to the destination telephone only if the time of day corresponds to a time period in which the callee-generated status data indicates that the callee is available to receive the telephone call.

11. The system of claim 8 wherein the callee-generated status data is based on callee preferences, the call generation controller generating control signals to initiate the telephone call to the destination telephone only if call conditions correspond to the callee preferences.

12. The system of claim 1 wherein the caller status data is generated by the caller to indicate caller availability to receive the telephone call and is stored in a caller data structure on the computer network, the call processor accessing the data structure to retrieve the callee-generated status data, the call generation controller

generating control signals on the telephone network to initiate the telephone call to the originating telephone only if the caller-generated status data indicates that the caller is available to receive the telephone call.

13. The system of claim 12 wherein the caller-generated status data is based on time of day, the call generation controller generating control signals to initiate the telephone call to the originating telephone only if the time of day corresponds to a time period in which the caller-generated status data indicates that the caller is available to receive the telephone call.

14. The system of claim 12 wherein the caller-generated status data is based on caller preferences, the call generation controller generating control signals to initiate the telephone call to the originating telephone only if call conditions correspond to the callee preferences.

15. The system of claim 1 wherein the control signals on the telephone network comprise a ring signal to the originating telephone and a ring signal to the destination telephone.

16. The system of claim 1, further comprising an additional destination telephone associated with the callee and additional callee status data associated therewith, the call processor determining the callee status based on callee status data from the computer network and based on the additional callee status data associated with the additional destination telephone, the call generation controller to generate control signals on the telephone network to thereby initiate a telephone call to the originating telephone in response to the caller status data indicating that the caller is available to receive the telephone call and to initiate a telephone call to the destination telephone in response to the callee status data indicating that the callee is available to receive the telephone call or

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to the additional destination telephone in response to the additional callee status data indicating that the callee is available to receive the telephone call at the additional destination telephone.

17. The system of claim 1 wherein the destination telephone has an associated destination telephone number and the caller initiates activity of the call processor by selecting the destination telephone number.

18. The system of claim 17 wherein the caller selects the destination telephone number using the originating telephone.

19. The system of claim 17, further comprising a caller computing platform associated with the originating telephone and coupled to the computer network wherein the caller selects the destination telephone number using the caller computing platform.

20. A system for telephone call processing in a telephone network using a computer network, the system processing a telephone call between an originating telephone having an associated originating telephone number and a destination telephone having an associated destination telephone number, the system comprising:

a callee data structure contained within a computer network to store callee status data associated with the originating telephone number;

a caller data structure contained within the computer network to store caller status data associated with the destination telephone number;

a computer network access port used by the telephone network to access the caller and callee data structures; and

a call processor to access the callee and caller data structures via the computer network access port and to process the call processing request based on the callee and caller status data in the respective data structures.

21. The system of claim 20, further comprising a call generation controller to generate control signals on the telephone network to thereby initiate a telephone call to the originating telephone in response to the caller status data indicating that the caller is available to receive the telephone call and to initiate a telephone call to the destination telephone in response to the callee status data indicating that the callee is available to receive the telephone call.

22. The system of claim 20 wherein the callee data structure stores the callee status data in association with caller identification data and the incoming call includes origination identification data associated therewith, the controller using the origination identification data to identify callee status data stored in the callee data structure in association with the caller identification data.

23. The system of claim 22 wherein the identification data is telephone automatic number identification data.

24. The system of claim 20, further comprising a callee computing platform associated with the destination telephone and coupled to the computer network wherein the callee computing platform has an associated status based on user activity on the callee computing platform, the callee status data comprising the callee computing platform status.

25. The system of claim 20 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call and is stored in the

callee data structure on the computer network, the call processor accessing the callee data structure to retrieve the callee-generated status data, the call processor processing the telephone call only if the callee-generated status data indicates that the callee is available to receive the telephone call.

26. The system of claim 25 wherein the callee-generated status data is stored in the callee data structure in association with caller identification data and the telephone call includes origination identification data associated therewith, the call processor using the origination identification data to identify the callee-generated status data stored in the callee data structure in association with the caller identification data and processing the telephone call to initiate the telephone call to the destination telephone only if the callee-generated status data stored in association with the caller identification data indicates that the callee is available to receive the telephone call.

27. The system of claim 25 wherein the callee-generated status data is based on time of day, the call processor processing the telephone call to the destination telephone only if the time of day corresponds to a time period in which the callee-generated status data indicates that the callee is available to receive the telephone call.

28. The system of claim 25 wherein the callee-generated status data is based on callee preferences, the call generation controller generating control signals to initiate the telephone call to the destination telephone only if call conditions correspond to the callee preferences.

29. The system of claim 20, further comprising a callee computing platform associated with the destination telephone and coupled to the computer network, wherein the callee computing platform executes computerized scheduling software to

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generate a callee schedule, the call processor determining callee status data based on the callee schedule.

30. The system of claim 29 wherein the callee computing platform stores data related to the callee schedule in the callee data structure, the call processor accessing the callee data structure to retrieve the data related to the callee schedule.

31. The system of claim 29 wherein the callee computing platform stores data related to the callee schedule on the computer platform, the call processor accessing the callee computing platform via the computer network to retrieve the data related to the callee schedule.

32. The system of claim 20, further comprising a caller computing platform associated with the origination telephone and coupled to the computer network wherein the caller computing platform has an associated status based on user activity on the caller computing platform, the caller status data comprising the caller computing platform status.

33. The system of claim 20 wherein the caller status data is generated by the caller to indicate caller availability to receive the telephone call and is stored in the caller data structure on the computer network, the call processor accessing the caller data structure to retrieve the caller-generated status data, the call processor processing the telephone call only if the caller-generated status data indicates that the caller is available to receive the telephone call.

34. The system of claim 33 wherein the caller-generated status data is based on time of day, the call processor processing the telephone call to the origination

telephone only if the time of day corresponds to a time period in which the caller-generated status data indicates that the caller is available to receive the telephone call.

35. The system of claim 33 wherein the caller-generated status data is based on caller preferences, the call processor processing the telephone call to initiate the telephone call to the originating telephone only if call conditions correspond to the caller preferences.

36. The system of claim 20, further comprising a caller computing platform associated with the origination telephone and coupled to the computer network, wherein the caller computing platform executes computerized scheduling software to generate a caller schedule, the call processor determining caller status data based on the caller schedule.

37. The system of claim 36 wherein the caller computing platform stores data related to the caller schedule in the caller data structure, the call processor accessing the caller data structure to retrieve the data related to the caller schedule.

38. The system of claim 36 wherein the caller computing platform stores data related to the caller schedule on the computer platform, the call processor accessing the caller computing platform via the computer network to retrieve the data related to the callee schedule.

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39. A computer-readable medium containing computer-executable instructions for telephone call processing in a telephone network using a computer network of a telephone call between an originating telephone having an associated originating telephone number and a destination telephone having an associated destination telephone number by performing the steps of:

storing callee status data within a computer network in association with the destination telephone number;

storing caller status data within a computer network in association with the originating telephone number;

from the telephone network, accessing the callee status data and the caller status data from the computer network; and

processing the telephone call processing request based on the callee and caller status data.

40. The computer-readable medium of claim 39, further comprising computer-executable instructions for generating control signals on the telephone network to thereby initiate a telephone call to the originating telephone in response to the caller status data indicating that the caller is available to receive the telephone call and to initiate a telephone call to the destination telephone in response to the callee status data indicating that the callee is available to receive the telephone call.

41. The computer-readable medium of claim 39 wherein the callee status data is stored in association with caller identification data and the incoming call includes origination identification data associated therewith, the computer-readable medium containing computer-executable instructions for processing the telephone call using the origination identification data to identify callee status data stored in association with the caller identification data.

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42. The computer-readable medium of claim 41 wherein the identification data is telephone automatic number identification data.

43. The computer-readable medium of claim 39 for use with a callee computing platform associated with the destination telephone and coupled to the computer network wherein the callee computing platform has an associated status based on user activity on the callee computing platform and the callee status data includes the callee computing platform status.

44. The computer-readable medium of claim 39 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call based on time of day and the computer-readable medium contains computer-executable instructions for performing the steps of processing the telephone call to the destination telephone only if the time of day corresponds to a time period in which the callee-generated status data indicates that the callee is available to receive the telephone call.

45. The computer-readable medium of claim 39 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call based on callee preferences and the computer-readable medium contains computer-executable instructions for performing the steps of processing the telephone call to the destination telephone only if call conditions correspond to the callee preferences.

46. The computer-readable medium of claim 39 for use with a callee computing platform associated with the destination telephone and coupled to the computer network wherein the callee computing platform executes computerized scheduling software to generate a callee schedule and the computer-readable medium contains computer-executable instructions for performing the steps of determining the callee status data based on the callee schedule.

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47. A method for telephone call processing in a telephone network using a computer network of a telephone call between an originating telephone having an associated originating telephone number and a destination telephone having an associated destination telephone number, the method comprising:

storing callee status data within a computer network in association with the destination telephone number;

storing caller status data within a computer network in association with the originating telephone number;

from the telephone network, accessing the callee status data and the caller status data from the computer network; and

processing the telephone call processing request based on the callee and caller status data.

48. The method of claim 47, further comprising generating control signals on the telephone network to thereby initiate a telephone call to the originating telephone in response to the caller status data indicating that the caller is available to receive the telephone call and to initiate a telephone call to the destination telephone in response to the callee status data indicating that the callee is available to receive the telephone call.

49. The method of claim 47 wherein the callee status data is stored in association with caller identification data and the incoming call includes origination identification data associated therewith, telephone call being processed using the origination identification data to identify callee status data stored in association with the caller identification data.

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50. The method of claim 49 wherein the identification data is telephone automatic number identification data.

51. The method of claim 47 for use with a callee computing platform associated with the destination telephone and coupled to the computer network wherein the callee computing platform has an associated status based on user activity on the callee computing platform and the callee status data includes the callee computing platform status.

52. The method of claim 47 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call based on time of day, the telephone call being processed to the destination telephone only if the time of day corresponds to a time period in which the callee-generated status data indicates that the callee is available to receive the telephone call.

53. The method claim 47 wherein the callee status data is generated by the callee to indicate callee availability to receive the telephone call based on callee preferences, the telephone call being processed to the destination telephone only if call conditions correspond to the callee preferences.

54. The method of claim 47 for use with a callee computing platform associated with the destination telephone and coupled to the computer network, wherein the callee computing platform executes computerized scheduling software to generate a callee schedule and the callee status data is based on the callee schedule.

55. The method of claim 47 for use with a caller computing platform associated with the originating telephone and coupled to the computer network wherein the caller computing platform has an associated status based on user activity on the caller

45

computing platform and the caller status data includes the caller computing platform status.

56. The method of claim 47 wherein the caller status data is generated by the caller to indicate caller availability to receive the telephone call based on time of day, the telephone call being processed to the originating telephone only if the time of day corresponds to a time period in which the caller-generated status data indicates that the caller is available to receive the telephone call.

57. The method claim 47 wherein the caller status data is generated by the caller to indicate caller availability to receive the telephone call based on caller preferences, the telephone call being processed to the originating telephone only if call conditions correspond to the caller preferences.

58. The method of claim 47 for use with a caller computing platform associated with the originating telephone and coupled to the computer network, wherein the caller computing platform executes computerized scheduling software to generate a caller schedule and the caller status data is based on the caller schedule.

ADD A' /

MSAL 01478



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/291,693	04/13/99	LIFFICK	S 664005.455

SEED AND BERRY LLP
6300 COLUMBIA CENTER
SEATTLE WA 98104-7092

WM01/1002

EXAMINER

SMITH, C

ART UNIT

PAPER NUMBER 3

2642

DATE MAILED: 10/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 291693	Applicant(s) LIFFICK, S. M.
	Examiner SMITH, C.H.	Group Art Unit 2642

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.

If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.

Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☐ Responsive to communication(s) filed on _____

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-58 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-58 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of References Cited, PTO-892

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

Serial Number: 09/291693

Page 2

Art Unit: 2642

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 of this title before the invention thereof by the applicant for patent.

Claims 1-58 are rejected under 35 U.S.C. 102(e) as being anticipated by DeSimone.

DeSimone discloses an interactive chat room whereby one participant to an on-line chat may give information, e.g., credit card information, his/her phone number, to a 3rd party in order to obtain another chat room participant's phone number so that both chat room participant's may engage in a private telephone conversation. DeSimone shows a telephone network (PSTN - 130) and an independent computer network (Internet -100). An originating telephone (103) is associated with a calling party and is coupled to the PSTN (130), along with a destination telephone (114) associated with the called telephone (114). PC (102) is associated with calling party (102) who is engaged in an Internet chat session and PC (113) is associated with the called party. A call processor will set up a telephone call from the calling party (102/103) to the called party (113/114) based upon the status of the calling and called parties' computer status. Both the calling and called parties' computer status will be "busy" in order that a telephone call can be set up between the parties.

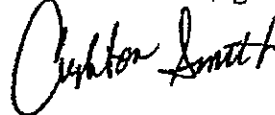
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Danne et al, Robinson et al, Kakizaki et al, Bauer et al

Serial Number: 09/291693

Page 3

Art Unit: 2642

Any inquiry concerning this communication should be directed to Creighton Smith
at telephone number (703) 308-2488.



Creighton Smith
Primary Examiner

Creighton Smith

27 September 2001

MSAL 01498

Notice of References Cited		Application No. 291693		Applicant Liffick, S.M.	
		Examiner SMITH, C.H.		Group Art Unit 2642	
				Page <u> </u> of <u> </u>	
U.S. PATENT DOCUMENTS					
*	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	6175619	1/2001	De Simone	379	93.21
B	5946381	8/1999	DANNE ETAL	379	142
C	5533102	07/1996	ROBINSON ETAL	379	142
D	6229883	05/2001	KAKIZAKI et al	379	93.23
E	669796	01/2001	BAUER et al	379	217X
F					
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FOREIGN PATENT DOCUMENTS					
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS
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T					
NON-PATENT DOCUMENTS					
*	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)				DATE
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V					
W					
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* A copy of this reference is not being furnished with this Office action.
(See Manual of Patent Examining Procedure, Section 707.05(a).)

WORKMAN NYDEGGER & SEELEY

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SALT LAKE CITY, UTAH 84111
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THOMAS R. VUKSINICK
LARRY R. LAYCOCK
JONATHAN W. RICHARDS
DAVID R. WRIGHT
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GENERAL E-MAIL: info@wrnpatent.com

Express Mailing Label No: EL 893 520 507 US

PATENT APPLICATION

Docket No: 13768.67.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Stephen Mitchell Liffick

Serial No.:

09/291,693

Filed:

April 13, 1999

For:

SYSTEM AND METHOD FOR
COMPUTERIZED STATUS MONITOR AND
USE IN A TELEPHONE NETWORK

Examiner:

unassigned

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) Art Unit
) 2742
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TRANSMITTAL OF REVOCATION AND SUBSTITUTE POWER OF ATTORNEY, AND CHANGE OF ATTORNEY DOCKET NUMBER

Assistant Commissioner for Patents
Washington, D.C. 20231

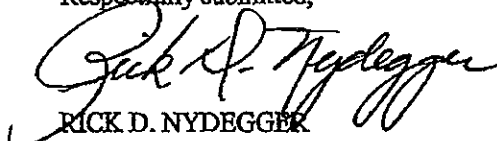
Sir:

Transmitted herewith is a Revocation and Substitute Power of Attorney with
accompanying Exhibit A (copy of recorded assignment), and a Change of Attorney Docket

Number for entry in the above-identified application.

Dated this 16 day of OCTOBER, 2001.

Respectfully submitted,



RICK D. NYDEGGER
Attorney for Applicant
Registration No. 28,651



022913

PATENT TRADEMARK OFFICE

RDN:dmh

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EXPRESS MAIL NO.: EL 893 520 507 US

PATENT APPLICATION
Docket No: 13768.67.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Stephen Mitchell Liffick

Serial No.: 09/291,693

) Art Unit
) 2742

Filed: April 13, 1999

Confirmation No.: n/a

For: SYSTEM AND METHOD FOR COMPUTERIZED
STATUS MONITOR AND USE IN A
TELEPHONE NETWORK

Examiner: unassigned

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OCT 22 2001
Technology Center 2600

REVOCATION AND SUBSTITUTE POWER OF ATTORNEY

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

The undersigned, Daniel D. Crouse, declares: that he is Assistant Secretary of MICROSOFT CORPORATION, and that he is authorized to execute this Revocation and Substitute Power of Attorney on behalf of MICROSOFT CORPORATION; and that MICROSOFT CORPORATION, is the assignee of the entire interest of the above-identified application, as shown by the assignment recorded in the United States Patent Office at Reel 9908, Frame 0290, et seq., a copy of said assignment is attached at Exhibit A hereto; and that the attached assignment has been reviewed by him, and to the best of his knowledge and belief title is in the assignee MICROSOFT CORPORATION. The assignee, MICROSOFT

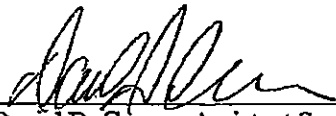
CORPORATION, hereby revokes all previous powers of attorney in the above-identified application, and now hereby appoints as attorneys and/or patent agents all listed under Customer No. 022913; and DANIEL D. CROUSE, Registration No. 32,022; and KATIE SAKO, Registration No. 32,628, of MICROSOFT CORPORATION, One Microsoft Way, Redmond, Washington 98052, as attorneys with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the Letters Patent, and to transact all business in the Patent and Trademark Office connected therewith. The declarant further declares that all statements made herein of his own knowledge are true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

All correspondence and telephonic communications should be directed to:

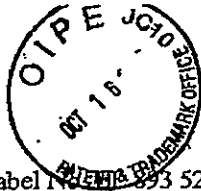
Rick D. Nydegger
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, Utah 84111

All previous powers of attorney are hereby revoked.

Signed at Redmond, Washington, this 9th day of October, 2001.


Daniel D. Crouse, Assistant Secretary
MICROSOFT CORPORATION
One Microsoft Way
Redmond, Washington 98052

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PATENT APPLICATION
Docket No.: 13768.67.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Stephen Mitchell Liffick

Serial No.:

09/291,693

Filed:

April 13, 1999

For:

SYSTEM AND METHOD FOR COMPUTERIZED STATUS MONITOR AND USE IN A TELEPHONE NETWORK

Examiner:

unassigned

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) Art Unit
) 2742

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OCT 22 2001
Technology Center 2800

CHANGE OF ATTORNEY DOCKET NUMBER

Assistant Commissioner of Patents
Washington, D. C. 20231

Sir:

For convenience and ready identification of the papers received in connection with the above-identified patent application, please reference in all future communications my Docket No.

13768.67.20. All communications should remain addressed to the undersigned:

RICK D. NYDEGGER
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, Utah 84111
(801) 533-9800

Dated this 16 day of OCTOBER, 2001.

Respectfully submitted,



RICK D. NYDEGGER
Attorney for Applicant
Registration No. 28,651



022913

PATENT TRADEMARK OFFICE

RDN:dmh

Docket No.: 13768.67.20

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MSAL 01571



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARK
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

- (1) CREIGHTON SMITH (3) _____
(2) RICK NYLSEGER (4) _____

Date of Interview 05 FEB 02Type: ☐ Telephonic ☐ Televideo Conference ☒ Personal (copy is given to ☐ applicant ☐ applicant's representative).Exhibit shown or demonstration conducted: ☐ Yes ☒ No If yes, brief description: _____Agreement ☐ was reached. ☒ was not reached.Claim(s) discussed: 59Identification of prior art discussed: De Simone

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant proposed 2 new method claims and 2 new computer program product claims generally described by new claim 59 to distinguish over De Simone. It appears that claim 59 reads over De Simone - subject to further search

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

Examiner Note: You must sign this form unless it is an attachment to another form.

Creighton Smith
Creighton Smith
Primary Examiner

Manual of Patent Examining Procedure, Section 713.04 Substance of Interview must Be Made of Record

Except as otherwise provided, a complete written statement as to the substance of any face-to-face or telephone interview with regard to an application must be made of record in the application, whether or not an agreement with the examiner was reached at the interview.

§1.133 Interviews

(b) In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111 and 1.135. (35 U.S.C. 132)

§ 1.2. Business to be transacted in writing. All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete a two-sheet carbon Interleaf Interview Summary Form for each interview held after January 1, 1978 where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks in neat handwritten form using a ball point pen. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, pointing out typographical errors or unreadable script in Office actions or the like, or resulting in an examiner's amendment that fully sets forth the agreement are excluded from the interview recordation procedures below.

The Interview Summary Form shall be given an appropriate paper number, placed in the right hand portion of the file, and listed on the "Contents" list on the file wrapper. In a personal interview, the duplicate copy of the Form is removed and given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephonic interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication.

The Form provides for recordation of the following information:

- Application Number of the application
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (personal or telephonic)
- Name of participant(s) (applicant, attorney or agent, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the claims discussed
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). (Agreements as to allowability are tentative and do not restrict further action by the examiner to the contrary.)
- The signature of the examiner who conducted the interview
- Names of other Patent and Trademark Office personnel present.

The Form also contains a statement reminding the applicant of his responsibility to record the substance of the interview.

It is desirable that the examiner orally remind the applicant of his obligation to record the substance of the interview in each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check a box at the bottom of the Form informing the applicant that he need not supplement the Form by submitting a separate record of the substance of the interview.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview:

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner. The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he feels were or might be persuasive to the examiner,
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete or accurate, the examiner will give the applicant one month from the date of the notifying letter to complete the reply and thereby avoid abandonment of the application (37 CFR 1.135(c)).

Examiner to Check for Accuracy

Applicant's summary of what took place at the interview should be carefully checked to determine the accuracy of any argument or statement attributed to the examiner during the interview. If there is an inaccuracy and it bears directly on the question of patentability, it should be pointed out in the next Office letter. If the claims are allowable for other reasons of record, the examiner should send a letter setting forth his or her version of the statement attributed to him. If the record is complete and accurate, the examiner should place the indication "Interview record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



03.05.02

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MAR 11 2002

Technology Center 2600

PATENT APPLICATION
Docket No. 13768.67.20

2642 *β*

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Stephen Mitchell Liffick

Serial No.:

09/291,693

) Art Unit

Conf No.:

2390

) 2642

Filed:

April 13, 1999

For:

SYSTEM AND METHOD FOR COMPUTERIZED)
STATUS MONITOR AND USE IN A)
TELEPHONE NETWORK)

Examiner:

C. H. Smith

AMENDMENT A

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Responsive to the Office Action dated October 2, 2001, (paper No. 3), as extended by a
Petition for Two Months Extension filed of even date, Applicant respectfully requests entry of
the following amendments and reconsideration of the pending claims in view of the matters
discussed at the Examiner Interview of Feb. 5, 2002, and the further remarks herein.

in the Claims:

Please cancel claims 1-58 without prejudice.

Please add new claims 59-78 as follows:

A1

~~59~~ (New) In a system that includes a telephone network and a computer network with one or more users, wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, comprising:

at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;

at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party; and

using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

²
~~60~~ (New) A method as recited in claim ~~59~~¹, further comprising, at the computer network, monitoring activity of a user computer connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

³
~~61~~ (New) A method as recited in claim ~~59~~¹, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

⁴
~~62~~ (New) A method as recited in claim ~~59~~¹, wherein the pre-determined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

⁵
~~63~~ (New) A method as recited in claim ~~59~~¹, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer.

⁶
~~64~~ (New) A method as recited in claim ~~59~~¹, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

2
65. (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

A
cont. a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, and wherein said method comprises:

at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;

at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party; and

at the computer network, using the set of pre-determined rules to process
i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party.

A
cont.

⁸
~~68~~ (New) A computer program product as recited in claim ~~68~~⁷, wherein the method further comprises using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

⁹
~~68~~ (New) A computer program product as recited in claim ~~68~~⁷, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

¹⁰
~~68~~ (New) A computer program product as recited in claim ~~68~~⁷, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

¹¹
~~68~~ (New) A computer program product as recited in claim ~~68~~⁷, wherein the method further comprises, at the computer network, monitoring activity of a user computer connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

¹²
~~79.~~ (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, comprising:

at the computer network, monitoring activity of the user computers associated with both a first and a second party;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party; and

using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

¹³
~~80.~~ (New) A method as recited in claim ¹²~~79~~, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

¹⁴
~~72~~ (New) A method as recited in claim ¹²~~70~~, wherein the pre-determined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

¹⁵
~~73~~ (New) A method as recited in claim ¹²~~70~~, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer associated with the second party.

¹⁴
~~74~~ (New) A method as recited in claim ¹²~~70~~, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

¹⁷
75 (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

1
cont. a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, wherein said method comprises:

at the computer network, monitoring activity of the user computers associated with both the first and second parties;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party; and

at the computer network, using the set of pre-determined rules to process
i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party.

¹⁸
76 (New) A computer program product as recited in claim ¹⁷75, wherein the method further comprises using the information processed at the computer network to facilitate

connecting the call originated by the first party through the telephone network to the second party.

¹⁹
~~78~~ (New) A computer program product as recited in claim ¹⁷
~~78~~, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

²⁰
~~78~~ (New) A computer program product as recited in claim ¹⁷
~~78~~, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

REMARKS

Applicant expresses appreciation to the Examiner for the Interview conducted with applicant's representative, Rick D. Nydegger. During the Interview, Applicant proposed submitting new independent method claims and corresponding computer program product claims as generally described by the draft claim discussed at the interview. As noted in the Examiner's Interview Summary (Paper No. 5) prepared at the conclusion of the Interview, the Examiner noted that the proposed claims, as represented in particular by the draft claim discussed, appeared to be patentably distinguished over the applied prior art.

By this paper, applicant has submitted new independent method claims 59 and 70, and corresponding computer program product claims 65 and 75, respectively. Claims 59-78 are submitted for entry and reconsideration.

In the Office Action (Paper No. 3) all of the then pending claims (e.g., 1-58) were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Pat. No. 6,175,619 ("DeSimone").¹ Since the independent claims as originally submitted have been cancelled and replaced by new independent claims 59, 65, 70 and 75, the prior rejections of record are moot. Accordingly, the following remarks are not submitted in response to those rejections. Indeed, as reflected in the Examiner's Interview Summary (Paper No. 5), the proposed new claims appeared to be patentably distinguished over the prior art of record, and as such, would appear to be allowable in the first instance. Accordingly, the following remarks merely confirm the points of discussion that were made at the Interview.

¹ Since DeSimone qualifies, if at all, as "prior" art only under § 102(e), applicant specifically reserves the right to challenge the prior art status of the reference at such time as may be necessary or desirable. Any argument herein distinguishing DeSimone on the merits is to be taken in all respects as merely assuming *arguendo* the prior art status of the reference.

As discussed at the Interview, DeSimone describes a system and method for providing anonymous voice communications using a telephone network under the direction of an on-line data network. In particular, a "call broker" receives call setup information from on-line session participants, such as chat room participants, which is then used to permit anonymous (e.g., neither party knows the name or number of the other) calls to be carried out when requested by both parties. The system and method require that each chat room participant establish a data connection to a telephone company site using a web browser to establish a call broker session. The call broker provides session information (such as a telephone company URL) and a participant authorization code that are passed to a selected chat participant. If the selected chat participant then uses the URL of the telephone company to access the telephone company's site, and then enters the authorization code that was passed to him or her, along with his or her call-back number, the telephone company can then complete a voice link between the initiator and the selected chat participant, while maintaining anonymity of both.

Thus, in simplest terms, DeSimone uses an affirmative request from both participants to initiate the call in an anonymous manner through a broker. This is manifestly unlike the claimed invention, which is directed to a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to a computer network. As claimed, applicant's invention requires receiving information from a telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party. This information is communicated to a computer network (such as a server on the Internet) which is interfaced to the telephone network. The second party's activity on the network is monitored. The monitoring server also stores at the computer network a set of pre-determined rules for determining when the second party is available to take

a call from the first party. Then, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first part, and ii) information regarding the monitored activity of the user computer of the second party, a determination is made as to when the second party is available to take the call originated by the first party. Using the information processed at the computer network using the pre-determined rules, the call originated by the first party through the telephone network to the second party is facilitated so that the call can be connected at the appropriate time through the telephone network.

Thus, for at least the foregoing reasons, and as reflected in the Interview Summary, as defined in the proposed claims, applicant's invention is neither anticipated nor made obvious by the prior art of record.

In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 4th day of March, 2002.

Respectfully submitted,

R. Burns Israel

R. BURNS ISRAELSEN
Attorney for Applicant
Registration No. 42,685



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G:\DATA\WP\DOCS\SRN\MICROSOFT\OTHER\DOC\67.20 AMENDMENT A.DOC

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claims 1-58 have been canceled.

New claims 59-78 have been added as follows:

59. (New) In a system that includes a telephone network and a computer network with one or more users, wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, comprising:

at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;

at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party; and

using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

60. (New) A method as recited in claim 59, further comprising, at the computer network, monitoring activity of a user computer connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

61. (New) A method as recited in claim 59, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

62. (New) A method as recited in claim 59, wherein the pre-determined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

63. (New) A method as recited in claim 59, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer.

64. (New) A method as recited in claim 59, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

65. (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, and wherein said method comprises:

at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;

at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party; and

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party.

66. (New) A computer program product as recited in claim 65, wherein the method further comprises using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

67. (New) A computer program product as recited in claim 65, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

68. (New) A computer program product as recited in claim 65, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

69. (New) A computer program product as recited in claim 65, wherein the method further comprises, at the computer network, monitoring activity of a user computer connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

70. (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, comprising:

at the computer network, monitoring activity of the user computers associated with both a first and a second party;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party; and

using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

71. (New) A method as recited in claim 70, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

72. (New) A method as recited in claim 70, wherein the pre-determined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

73. (New) A method as recited in claim 70, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer associated with the second party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

74. (New) A method as recited in claim 70, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

75. (New) In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, wherein said method comprises:

at the computer network, monitoring activity of the user computers associated with both the first and second parties;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party; and

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party.

76. (New) A computer program product as recited in claim 75, wherein the method further comprises using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

77. (New) A computer program product as recited in claim 75, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

78. (New) A computer program product as recited in claim 75, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application	09/291,693
	Filing Date	April 13, 1999
	First Named	Stephen Mitchell Liftick
	Group Art Unit	2642
	Examiner Name	Smith, C. H.
Total Number of Pages in This Submission	Attorney Docket Number	13768.67.20

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Date	March 4, 2002

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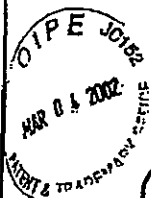
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Application 09/291,693

Filing Date April 13, 1999

First Named Stephen Mitchell Liffick

Group Art Unit 2642

Examiner Name Smith, C. H.

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WORKMAN, NYDEGGER & SEELEY

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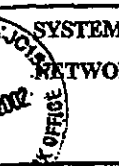
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COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Large Entity)				Docket No. 13768.67.20	
In Re Application Of: Stephen Mitchell Liffick					
Serial No. 09/291,693	Filing Date April 13, 1999	Examiner Smith, C. H.	Group Art Unit 2642		
<div style="float: left; width: 100px; text-align: center;">  </div> SYSTEM AND METHOD FOR COMPUTERIZED STATUS MONITOR AND USE IN A TELEPHONE NETWORK					
<u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u>					
This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of <u>October 2, 2001</u> in the above-identified application. <div style="text-align: center; font-size: small;">Date</div>					
The requested extension is as follows (check time period desired): <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> One month <input checked="" type="checkbox"/> Two months <input type="checkbox"/> Three months <input type="checkbox"/> Four months <input type="checkbox"/> Five months </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> from: <u>January 2, 2002</u> <div style="text-align: center; font-size: x-small;">Date</div> </div> <div> until: <u>March 2, 2002</u> <div style="text-align: center; font-size: x-small;">Date</div> </div> </div>					
The fee for the amendment and extension of time has been calculated as shown below:					
CLAIMS AS AMENDED					
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	20 -	58 =	0	x \$18.00	\$0.00
INDEP. CLAIMS	4 -	4 =	0	x \$84.00	\$0.00
FEE FOR AMENDMENT					\$0.00
FEE FOR EXTENSION OF TIME					\$400.00
TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME					\$400.00

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**COMBINED AMENDMENT & PETITION FOR EXTENSION OF
TIME UNDER 37 CFR 1.136(a) (Large Entity)**

Docket No.
13768.67.20


The fee for the amendment and extension of time is to be paid as follows:

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- ☐ Please charge Deposit Account No. in the amount of \$400.00
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R Burns Israel
Signature

Dated: March 4th, 2002

R. Burns Israel
Attorney for Applicant
Registration No.: 42,685



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	Filing Date	April 13, 1999
	First Named	Stephen Mitchell Littick
	Group Art Unit	2642
	Examiner Name	Smith, C. H.
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Signature	<i>R. Burns Israelsen</i>
Date	March 4, 2002

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DATE MAILED:

This is a communication from the examiner in charge of this application.
COMMISSIONER OF PATENTS AND TRADEMARKS

NOTICE OF ALLOWABILITY

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.314 and MPEP 1308.

This communication is responsive to Amendment filed 09 MAR 02

The allowed claim(s) is/are 59-78

The drawings filed on 13 APRIL '99 are acceptable as formal drawings.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

☐ All ☐ Some ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE FOR SUBMITTING NEW FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION. This three-month period for complying with the REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL is extendable under 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____.

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any reply to this notice should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Notice of Draftperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for the Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

Serial Number: 09/291693

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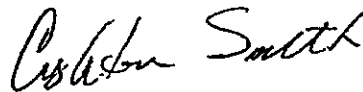
Art Unit: 2642

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The prior art fails to show applicant's step of monitoring the activity of the called and calling parties while on the computer network (Internet). No obvious combination of references found would teach one of ordinary skill in the art to make and use applicant's invention as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C Smith whose telephone number is (703) 3080-2488.



Creighton Smith
Primary Examiner

Creighton Smith

March 25, 2002

MSAL 01607

Exhibit

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US006430289B1

(12) **United States Patent**
Liffick

(10) Patent No.: **US 6,430,289 B1**
(45) Date of Patent: **Aug. 6, 2002**

(54) **SYSTEM AND METHOD FOR
COMPUTERIZED STATUS MONITOR AND
USE IN A TELEPHONE NETWORK**

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(US)

(73) Assignee: Microsoft Corporation, Redmond, WA
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/291,693

(22) Filed: Apr. 13, 1999

(51) Int. Cl.⁷ H04M 1/00

(52) U.S. Cl. 379/900; 379/142.15; 370/352

(58) Field of Search 379/201.06, 209.07,
379/201.08, 201.1, 210.11, 142.15, 196,
197, 198, 199, 900; 370/352, 353, 354

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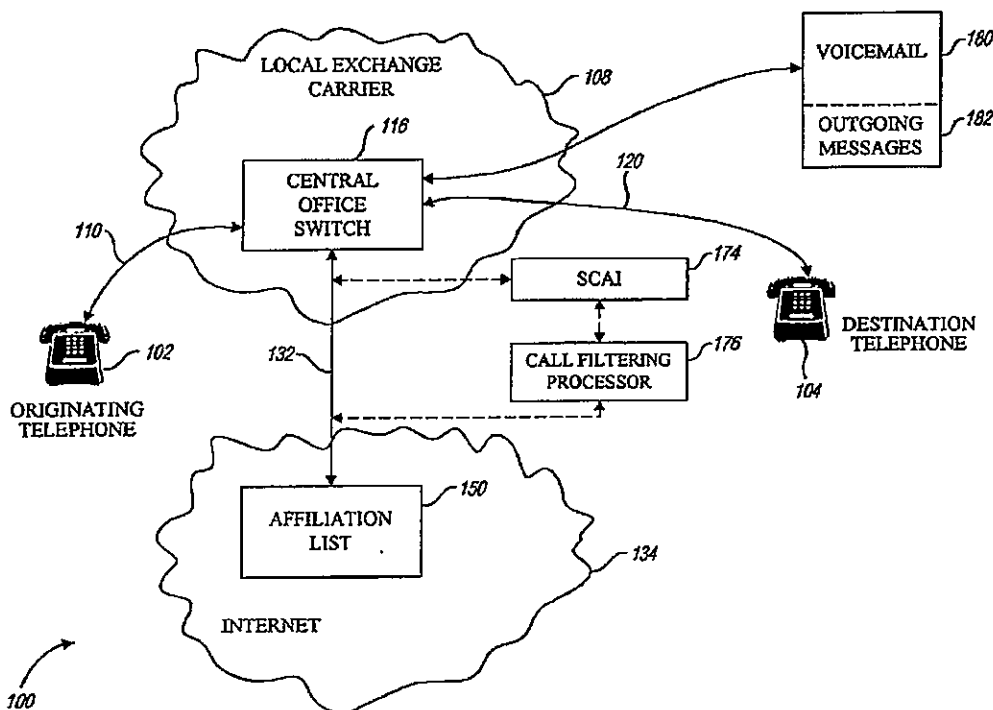
Primary Examiner—Craigton Smith

(74) Attorney, Agent, or Firm—Workman, Nydegger,
Seeley

(57) **ABSTRACT**

A telecommunication system combines telephone technology and computer network technology to monitor a caller and callee's computer activity and to access call processing criteria selected by the caller and callee and stored on the computer network. A component of the telephone system, such as a central office switch, accesses the caller and callee call processing criteria. The system evaluates the call processing criteria and, when conditions for both caller and callee are met, the telephone system initiates a telephone call between the caller and callee. The call processing criteria may include accepting all calls, no calls, or calls only from specified parties. In addition, the call processing criteria can vary in accordance with the time of day or an individual's personal preferences, or status, such as when an individual is in a meeting. A user's computer activity may also be monitored and the computer status as idle or active may be reported to the computer network as part of the call processing criteria.

20 Claims, 10 Drawing Sheets



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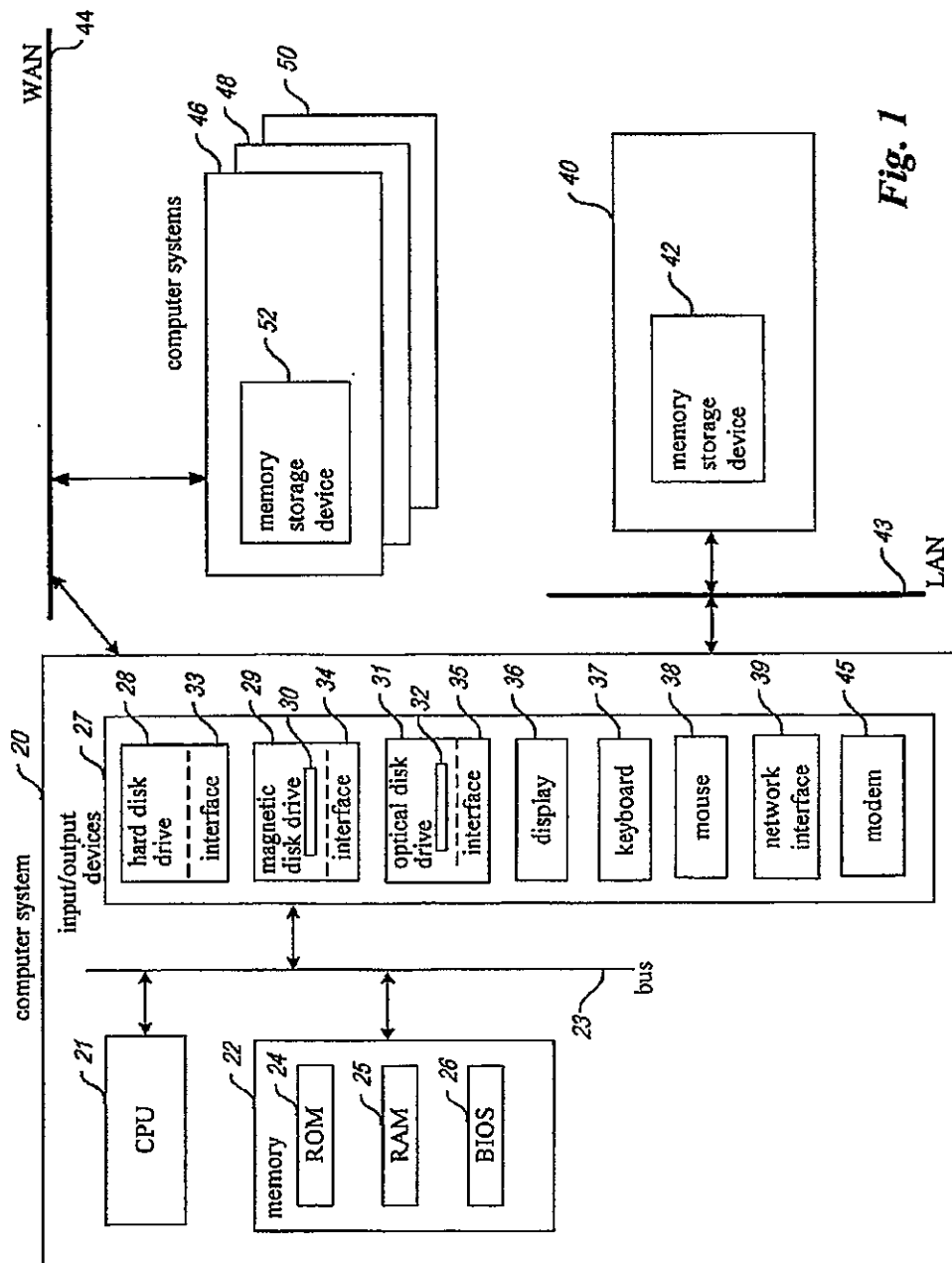


Fig. 1

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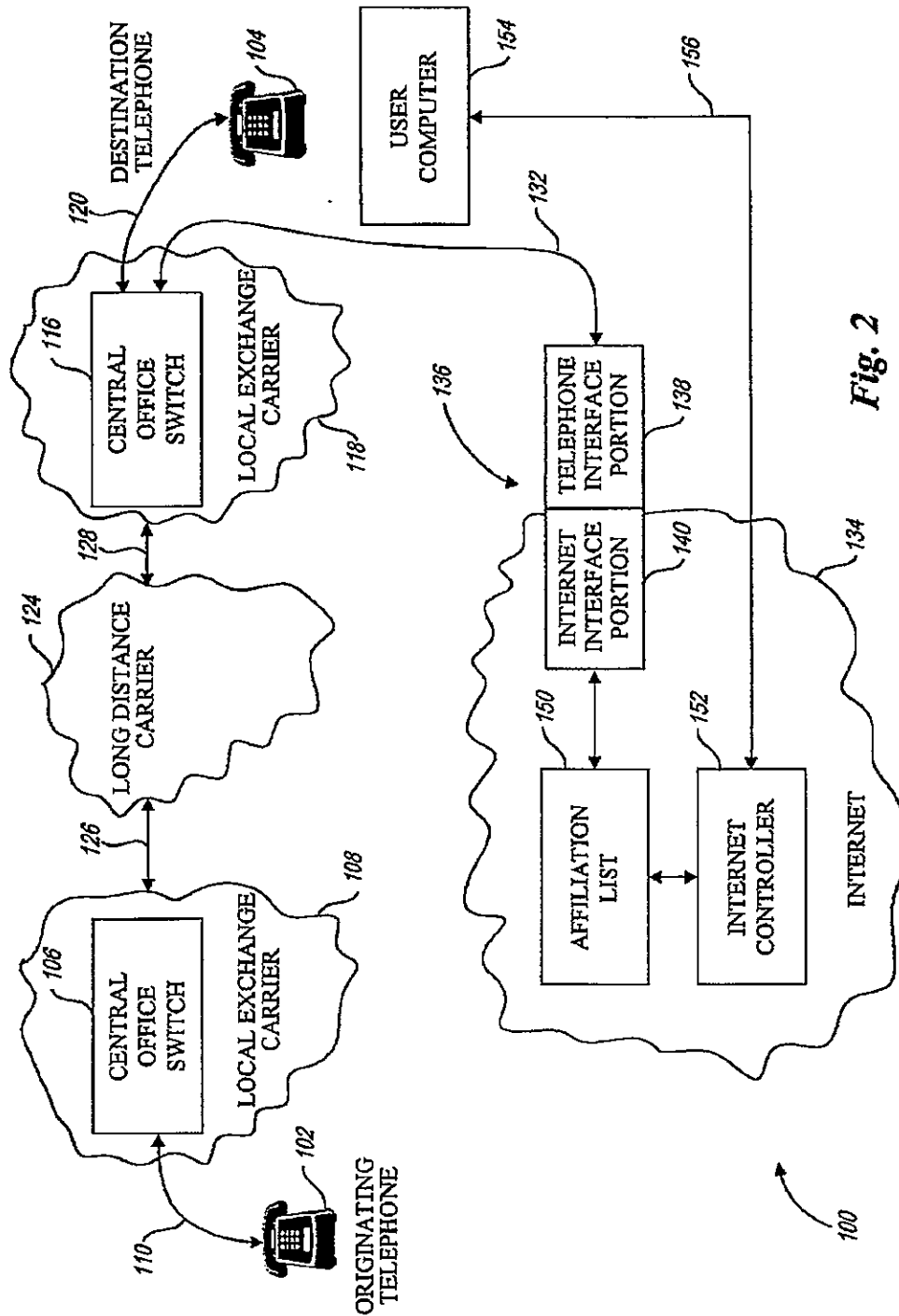


Fig. 2

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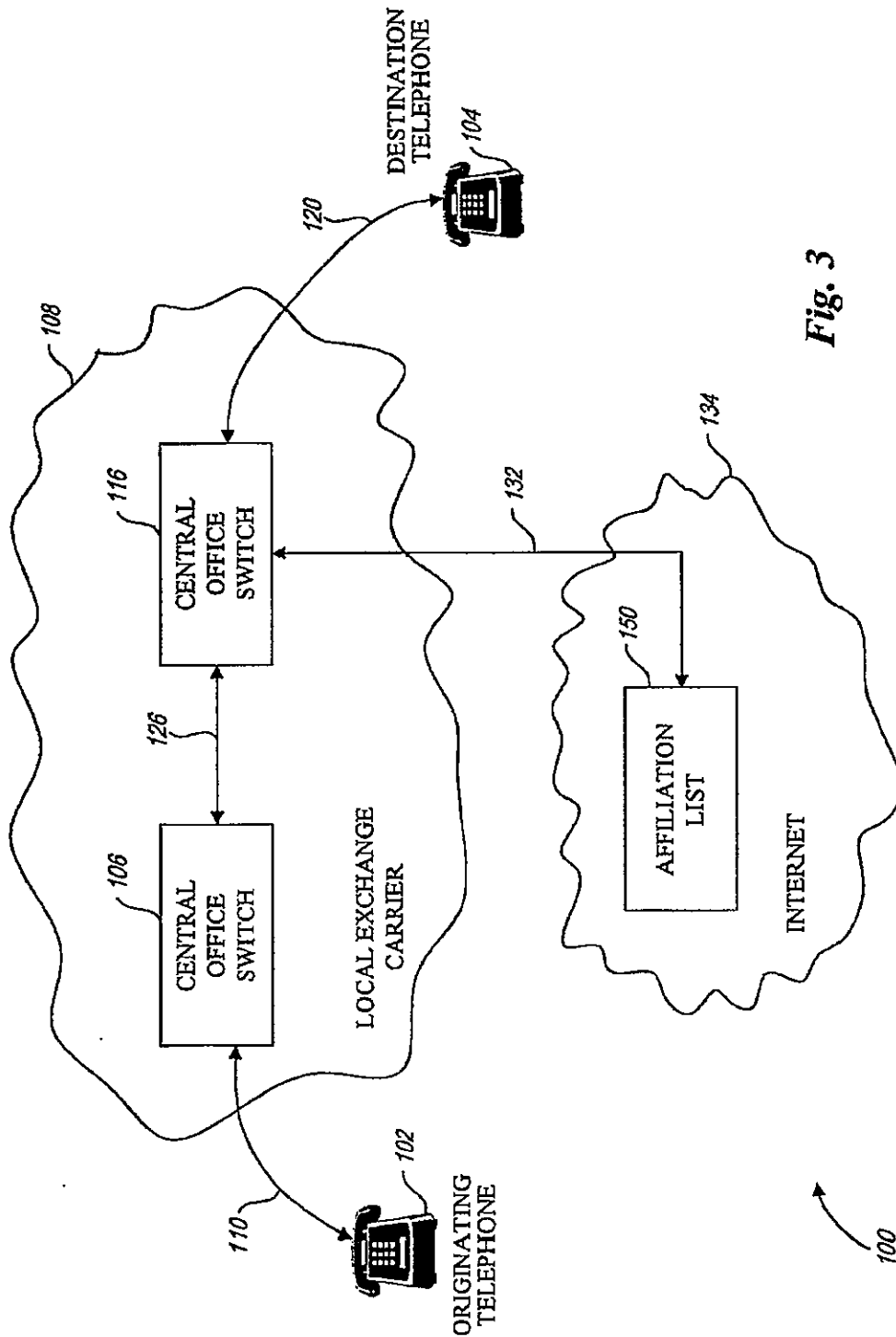


Fig. 3

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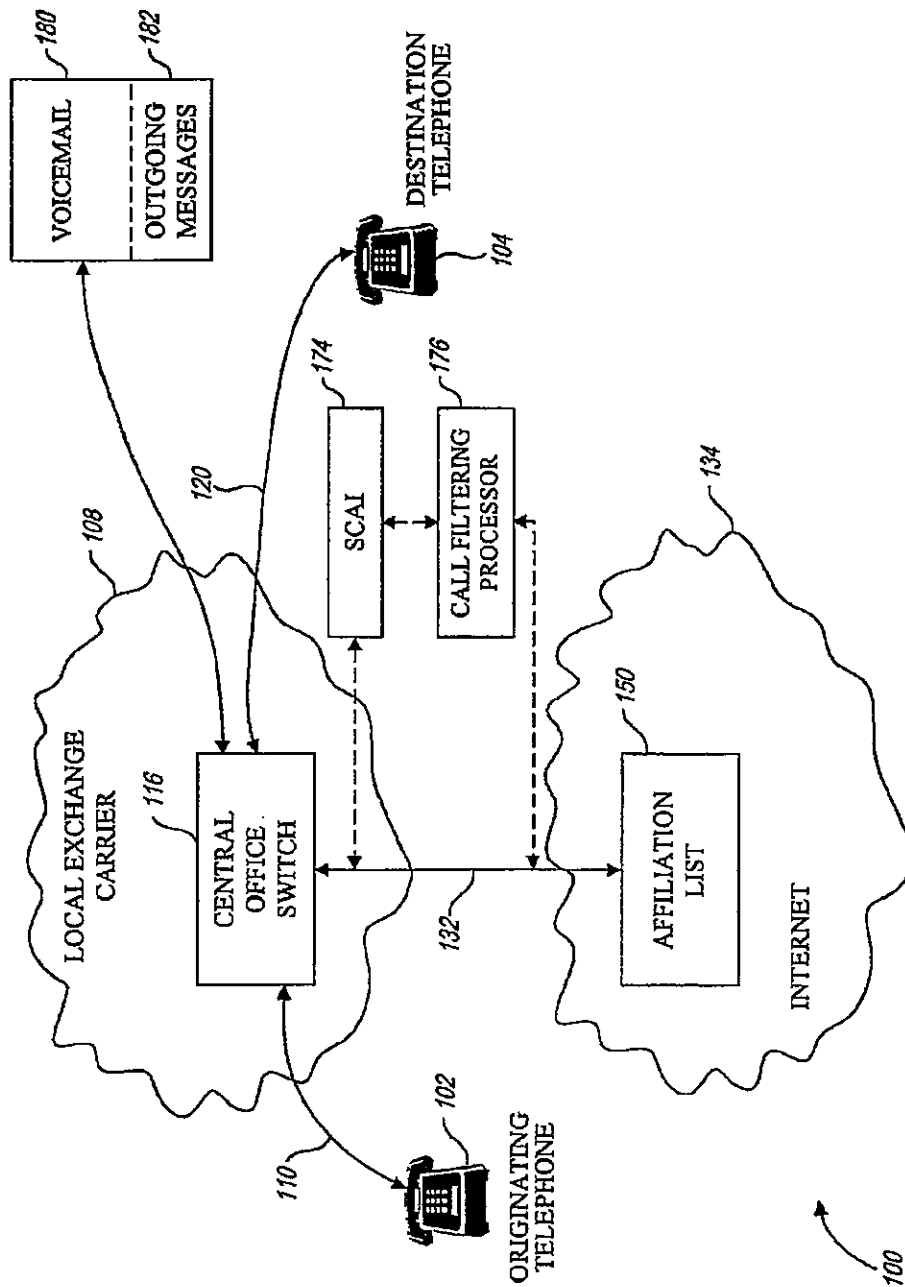


Fig. 4

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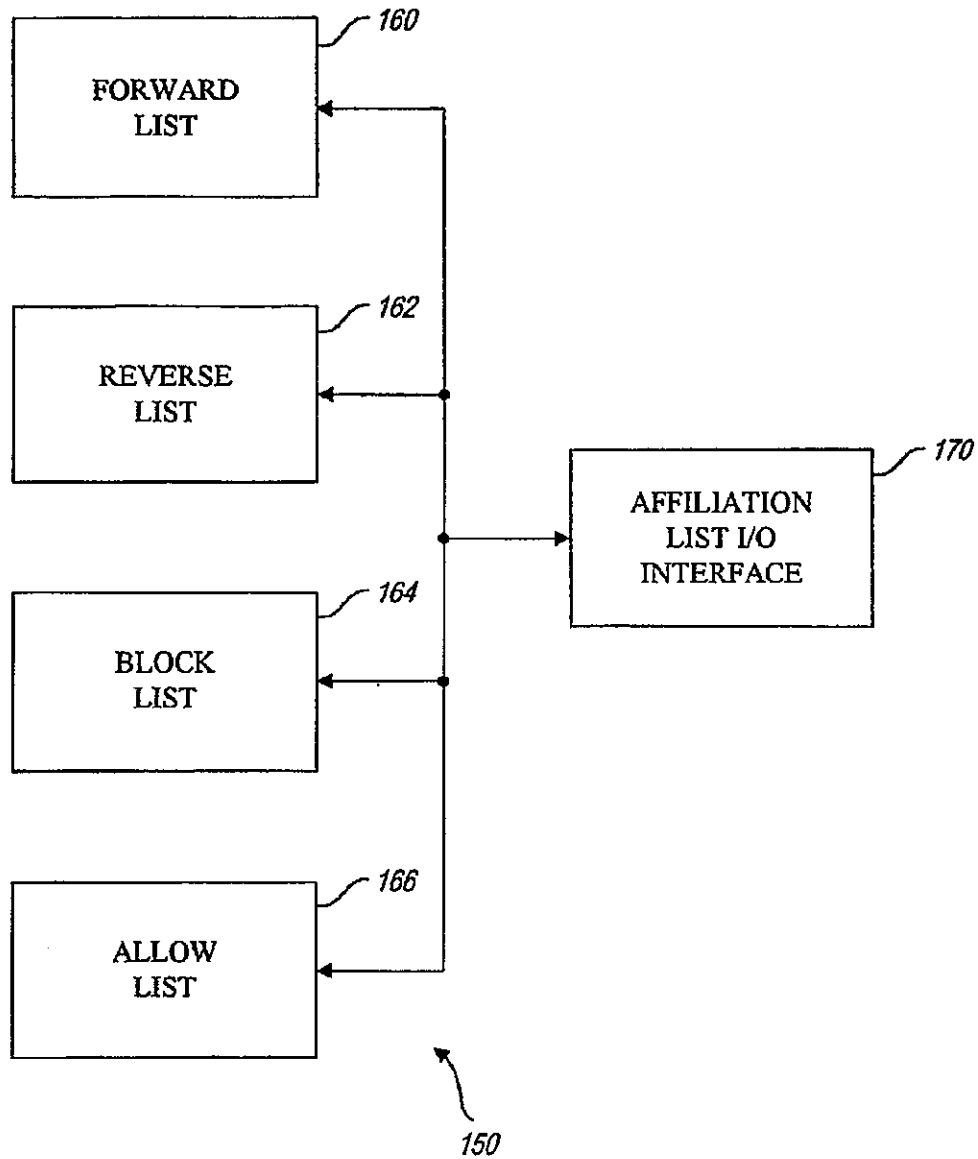


Fig. 5

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Name	Bob Smith
Subscriber Name	bobxyz@msn.com
Phone 1	(425) 555-1234
Phone 2	(425) 555-1235
.	
.	
.	
.	
.	
Name	Jim Smith
Subscriber Name	NONE
Phone 1	(206) 555-1236
.	
.	
.	
.	
.	
Name	John Adams
Subscriber Name	johnxyz@aol.com
Email Alias	atom smasher xyz
Phone 1	(703) 555-1237
Phone 2	(703) 555-1238
Phone 3	(703) 555-1239

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Fig. 6

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Name	Bob Smith
Subscriber Name	bobxyz@msn.com
Phone 1	(425) 555-1234
Phone 2	(425) 555-1235
Status	Allowed
.	
.	
.	
Name	Jim Smith
Subscriber Name	NONE
Phone 1	(206) 555-1236
Status	Blocked
.	
.	
.	
Name	John Adams
Subscriber Name	johnxyz@aol.com
Email Alias	atom smasher xyz
Phone 1	(703) 555-1237
Phone 2	(703) 555-1238
Phone 3	(703) 555-1239
Status	Conditional
Phone 1	- Allowed
Phone 2	- Allowed 9:00 a.m. - 11:30 a.m.
Phone 3	- Blocked

150

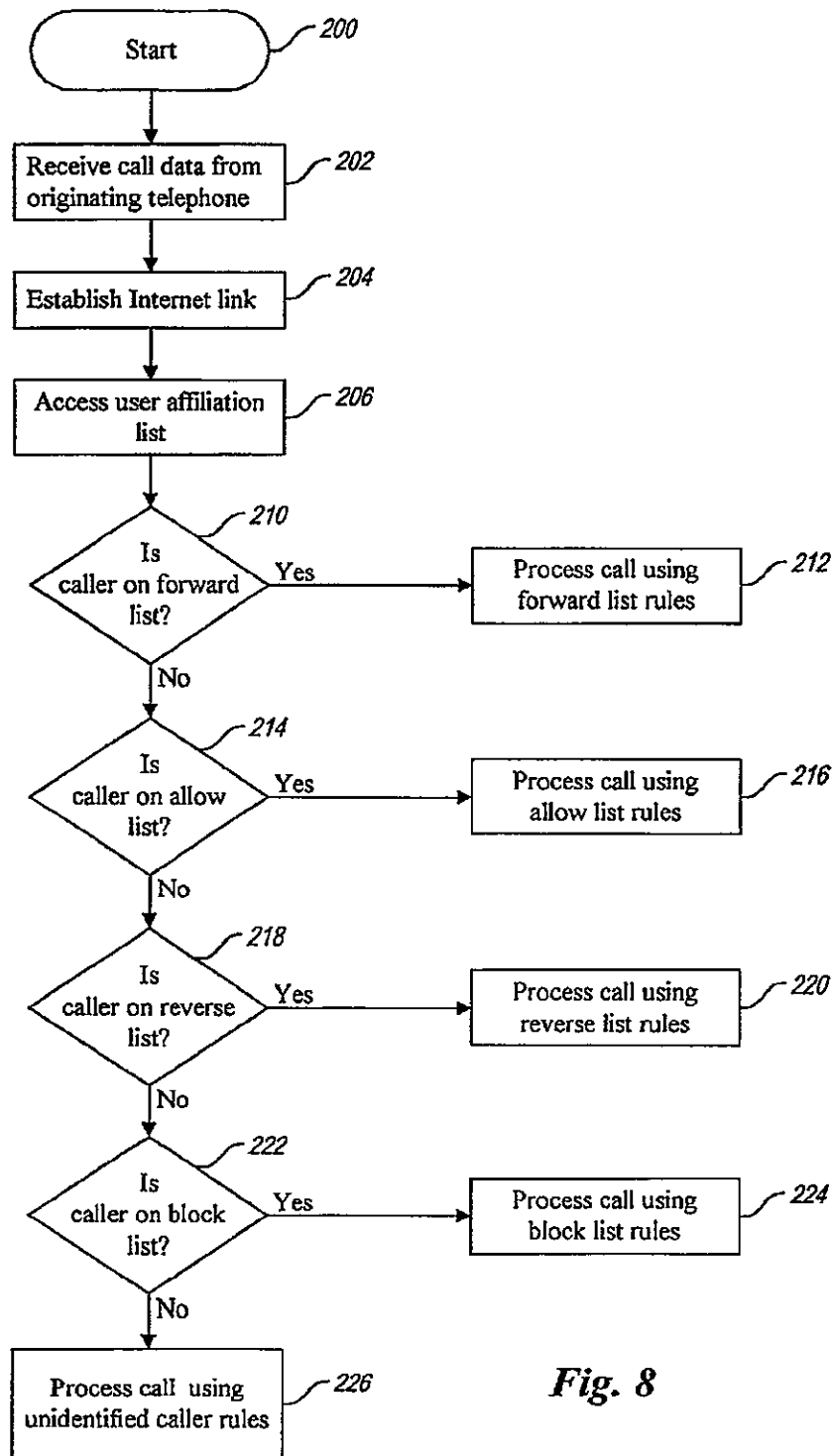
Fig. 7

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**Fig. 8**

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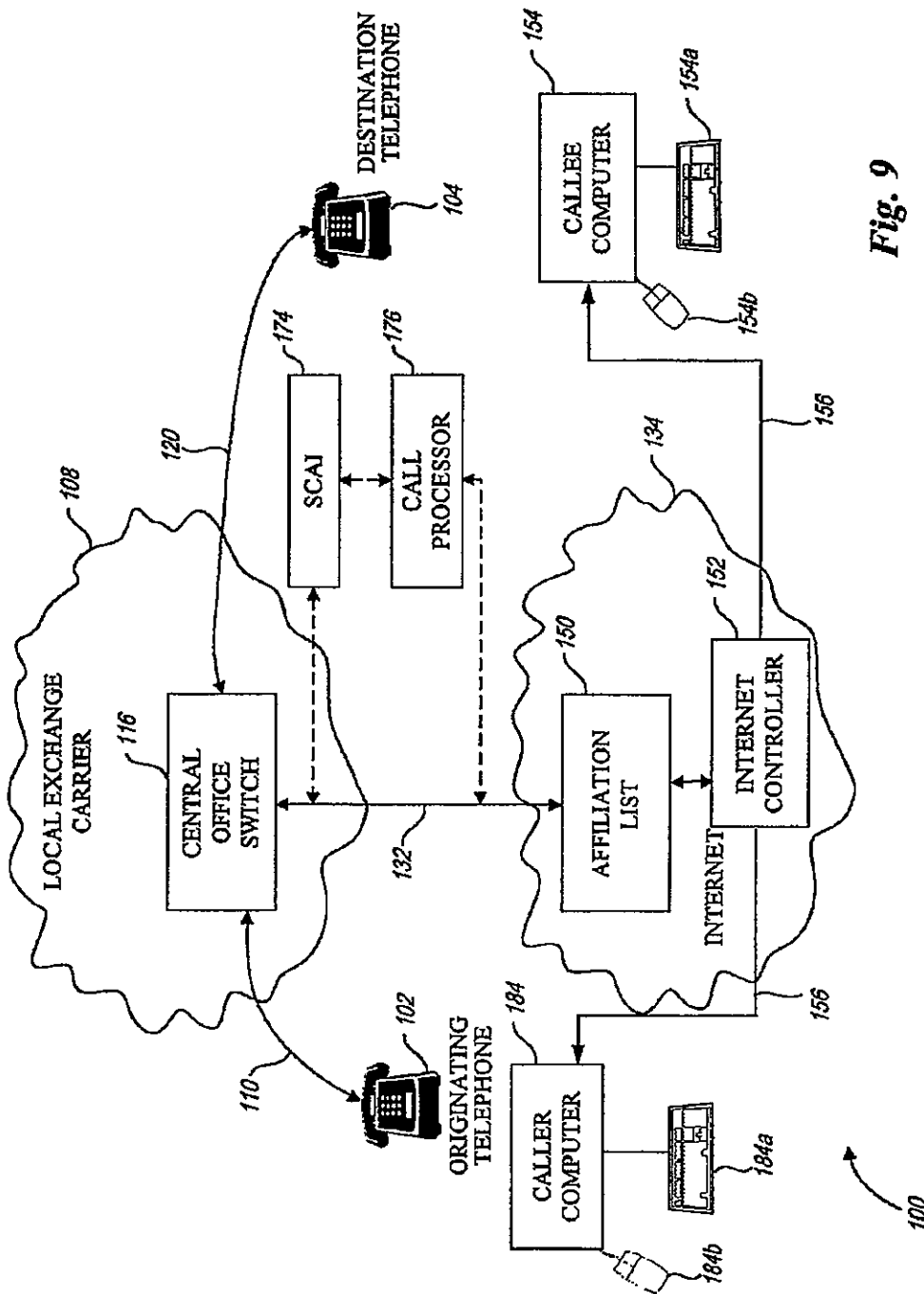


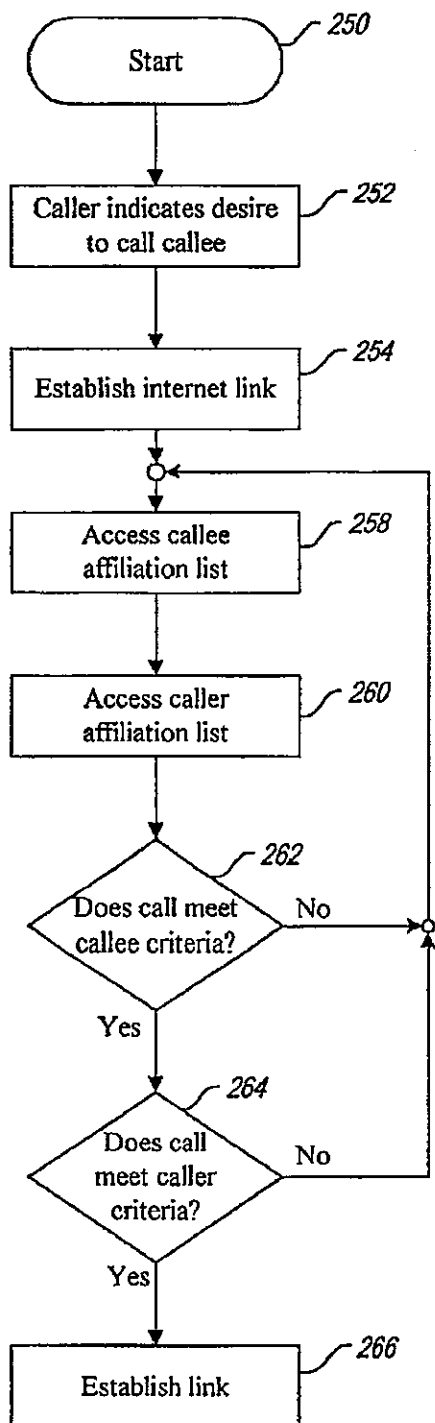
Fig. 9

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*Fig. 10*

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SYSTEM AND METHOD FOR COMPUTERIZED STATUS MONITOR AND USE IN A TELEPHONE NETWORK

TECHNICAL FIELD

The present invention is directed generally to telecommunications and, more particularly, to a system and method for establishing a telephone communication link using status reporting information from an independent computer network.

BACKGROUND OF THE INVENTION

Telephone communication systems have increased in both size and complexity. Early telephone systems required a human operator to manually connect an originating telephone with a destination telephone. With the introduction of automatic switching technology, the need for human operators to connect each and every call disappeared. However, even automated switches did not provide the wide range of features available on most telephone systems, such as voicemail, caller identification, call waiting, call forwarding, three-way calling and the like. Most telephone systems today include these features and allow the customer to select one or more features to customize their telephone service. With features such as voicemail, the telephone switching system must recognize when the destination telephone is either busy or remains unanswered. If either of these conditions occur, the calling party is routed to the voicemail service associated with the destination telephone.

Despite these improvements, telephone systems are incapable of determining when a particular recipient (i.e., a callee) may be available to receive a call. The caller has no choice but to place a call to the destination telephone and hope that the callee answers. Alternatively, the caller may leave a voicemail indicating a specific time at which the caller will place yet another call. This is an undesirable activity since it requires multiple calls, thus utilizing telecommunication capabilities in an inefficient manner. In addition, repeated or failed attempts to actually reach the callee are a waste of human resources since the parties must often call back and forth to each other a number of times before actually reaching the desired party. Therefore, it can be appreciated that there is a significant need for a system and method that can establish a telephone communication link when both parties are available to communicate. The present invention provides this and other advantages as will be apparent from the following detailed description and accompanying figures.

SUMMARY OF THE INVENTION

A system to specify user-selectable criteria for call processing is implemented on a telephone system, such as a public switched telephone network (PSTN). The user-specified call processing criteria is stored on a network that is accessible by the user for data entry and/or editing, and is also accessible by the PSTN to determine whether call processing criteria exists for the particular caller. The Internet provides a readily available data structure for storage of the user-selectable call processing criteria. The user can establish a database stored on the Internet in association with the user's telephone number and indicating the user-selectable call processing criteria for one or more potential callers.

The caller may be identified by caller identification data, such as automatic number identification (ANI). Based on the

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destination telephone number and the caller identification data, the PSTN accesses the Internet and examines an affiliation list corresponding to the destination telephone number. If the caller identification data is present in the affiliation list, the call may be processed in accordance with the user-specified criteria for that particular caller.

Both the caller and callee can specify user-selectable call processing criteria. The potential callee can specify call processing criteria for all incoming calls, such as providing a list of individuals from whom the person will accept calls, a list of individuals from whom the person will not accept calls, or conditional criteria, such as accepting or blocking calls during certain times of day or during certain periods of activity, such as when the user may be otherwise occupied and unwilling to accept an incoming call. In addition, the potential callee's computer activity may be monitored and the status of the computer as idle or active may be reported to the computer network. The caller indicates a desire to establish a communication link with the callee. The computer network accesses the caller's call processing criteria and the callee's call processing criteria. The call processing criteria for both the caller and callee are analyzed and when all conditions are met, a telephone communication link is established between an originating telephone associated with the caller and a destination telephone associated with the callee.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a computer system that includes components to implement the system of the present invention.

FIG. 2 is a functional block diagram outlining the operation of the present invention.

FIG. 3 is a functional block diagram of an alternate telecommunications configuration implementing the present invention.

FIG. 4 is a functional block diagram of another alternative telecommunications configuration implementing the present invention.

FIG. 5 is a functional block diagram providing details of the affiliation list of the system of FIG. 2.

FIG. 6 illustrates sample data provided in the list of FIG. 5.

FIG. 7 illustrates additional sample data provided in the list of FIG. 3.

FIG. 8 is a flowchart illustrating the operation of the system of FIG. 2.

FIG. 9 is a functional block diagram illustrating the system of the present invention to process a call in accordance with both a caller and callee call processing criteria.

FIG. 10 is a flowchart illustrating the operation of the system of FIG. 9.

DETAILED DESCRIPTION OF THE INVENTION

Existing telephone technology does not provide the telephone subscriber with a technique for controlling access to the user's telephone. Features such as caller ID identify the caller, but do not control access to the user's telephone. Thus, the conventional telephone system forwards the user to extreme options. The user may answer all incoming calls or may choose not to answer any incoming calls. However, the present invention provides selective options in between these two extremes. The present invention combines telephone technology with Internet technology to allow the user

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to "filter" incoming calls based on user-selected criteria. In particular, the user may establish a series of lists, stored on the Internet in association with the user's telephone, to filter incoming calls and thereby control access to the user's telephone. In addition, it is possible to monitor the activity or status of both a caller and a callee and establish a communication link between the caller's telephone and the callee's telephone when status data indicates that both are available for a telephone call.

FIG. 1 and the following discussion are intended to provide a brief, general description of a suitable computing environment in which the invention may be implemented. Although not required, the invention will be described in the general context of computer-executable instructions, such as program modules, being executed by a personal computer. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the invention may be practiced with other computer system configurations, including hand-held devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, and the like. The invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

With reference to FIG. 1, an exemplary system for implementing the invention includes a general purpose computing device in the form of a conventional personal computer 20, including a processing unit 21, a system memory 22, and a system bus 23 that couples various system components including the system memory to the processing unit 21. The system bus 23 may be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures. The system memory 22 includes read only memory (ROM) 24 and random access memory (RAM) 25. A basic input/output system 26 (BIOS), containing the basic routines that helps to transfer information between elements within the personal computer 20, such as during start-up, may be stored in ROM 24.

The personal computer 20 further includes input/output devices 27, such as a hard disk drive 28 for reading from and writing to a hard disk, not shown, a magnetic disk drive 29 for reading from or writing to a removable magnetic disk 30, and an optical disk drive 31 for reading from or writing to a removable optical disk 32 such as a CD ROM or other optical media. The hard disk drive 28, magnetic disk drive 29, and optical disk drive 31 are connected to the system bus 23 by a hard disk drive interface 33, a magnetic disk drive interface 34, and an optical drive interface 35, respectively. The drives and their associated computer-readable media provide nonvolatile storage of computer readable instructions, data structures, program modules and other data for the personal computer 20. Although the exemplary environment described herein employs a hard disk, a removable magnetic disk 30 and a removable optical disk 32, it should be appreciated by those skilled in the art that other types of computer readable media which can store data that is accessible by a computer, such as magnetic cassettes, flash memory cards, digital video disks, Bernoulli cartridges, random access memories (RAMs), read only memories (ROM), and the like, may also be used in the exemplary operating environment. Other I/O devices 27, such as a

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display 36, keyboard 37, mouse 38, and the like may be included in the personal computer 20 and function in a known manner. For the sake of brevity, other components, such as a joystick, sound board and speakers are not illustrated in FIG. 1.

The personal computer 20 may also include a network interface 39 to permit operation in a networked environment using logical connections to one or more remote computers, such as a remote computer 40. The remote computer 40 may be another personal computer, a server, a router, a network PC, a peer device or other common network node, and typically includes many or all of the elements described above relative to the personal computer 20, although only a memory storage device 42 has been illustrated in FIG. 1. The logical connections depicted in FIG. 1 include a local area network (LAN) 43 and a wide area network (WAN) 44. Such networking environments are commonplace in offices, enterprise-wide computer networks, intranets and the Internet.

When used in a LAN networking environment, the personal computer 20 is connected to the LAN 43 through the network interface 39. When used in a WAN networking environment, the personal computer 20 typically includes a modem 45 or other means for establishing communications over the wide area network 44, such as the Internet. The modem 45, which may be internal or external, permits communication with remote computers 46-50. In a networked environment, program modules depicted relative to the personal computer 20, or portions thereof, may be stored in the remote memory storage device 42 via the LAN 51 or stored in a remote memory storage device 52 via the WAN 44. It will be appreciated that the network connections shown are exemplary and other means of establishing a communications link between the computers may be used.

The present invention is embodied in a system 100 illustrated in the functional diagram of FIG. 2. In a typical telephone communication, an originating telephone 102 is operated by the caller to place a call to a destination telephone 104. The originating telephone generates signals that are detected by a central office switch 106 operated by a local exchange carrier (LEC) 108. The LEC 108 is the telephone service provider for the calling party. The originating telephone 102 is coupled to the central office switch 106 via a communication link 110. As those skilled in the art can appreciate, the communication link 110 may be a hard-wired connection, such as a fiber optic, copper wire, or the like.

Alternatively, the communication link 110 may be a wireless communication link if the originating phone 102 is a cellular telephone or some other form of wireless telephone.

Similarly, the destination telephone 104 is coupled to a central office switch 116 operated by a local exchange carrier (LEC) 118. The destination telephone 104 is coupled to the central office switch 116 via a communication link 120. The communication link 120 may be a hard-wired communication link or a wireless communication link, as described above with respect to the communication link 110. The present invention is not limited by the specific form of communication link or central office switch.

The LEC 108 establishes a communication link with the LEC 118. As illustrated in FIG. 2, the communication link between the LEC 108 and the LEC 118 is through a long distance carrier (LDC) 124. The LEC 108 establishes a communication link 126 with the LDC 124 which, in turn, establishes a communication link 128 with the LEC 118. If

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the telephone call from the originating telephone 102 to the destination telephone 104 is not a long distance call, the LDC 124 is not required. In this case, the communication link 126 may couple the LEC 108 directly to the LEC 118. The use of the system 100 with other telephone configurations are illustrated in other figures.

To place a telephone call, the caller activates the originating telephone 102 to dial in the telephone number corresponding to the destination telephone number 104, thereby establishing the communication link 110 with the central office switch 106. In turn, the central office switch 106 establishes the communication link 126 (via the LDC 124, if necessary), thus establishing a communication link with the central office switch 116. In a conventional telephone system, the central office switch 116 establishes the communication link 120 to the destination telephone 104 causing the destination telephone to ring. If the callee picks up the destination telephone, a complete communication link between the originating telephone 102 and the destination telephone 104 has been established. This is sometimes referred to as "terminating" the telephone call. The specific telecommunications protocol used to establish a telephone communication link between the originating telephone 102 and the destination telephone 104 is well known in the art and need not be described herein. The preceding description of techniques used to establish the telephone communication link are provided only as a basis for describing the additional activities performed by the system 100.

With the system 100, the central office switch 116 does not initially establish the telephone communication link 120 with the destination telephone 104 to cause the telephone to ring. Instead, the central office switch 116 establishes a communication link 132 with a computer network 134, such as the Internet. As those skilled in the art can appreciate, the Internet is a vast multi-computer network coupled together by data links having various communication speeds. Although the Internet 134 may use a variety of different communication protocols, a well-known communication protocol used by the Internet is a Transmission Control Protocol/Internet Protocol (TCP/IP). The transmission of data on the Internet 134 using the TCP/IP is known to those skilled in the art and need not be described in greater detail herein.

The central office switch 116 utilizes conventional telephone communication protocols, which may be different from the TCP/IP communication protocols used by the Internet 134. The system 100 includes a communication interface 136 to translate data between the two communication protocols. The communication interface 136 includes a telephone interface portion 138 and an Internet interface portion 140. The telephone interface portion 138 is coupled to the central office switch 116 via the communication link 132 such that communications occurring on the communication link 132 utilize the telephone communication protocol. The Internet interface portion 140 communicates via the Internet using conventional communication protocols, such as TCP/IP.

The communication interface 136 may be implemented on a computing platform that functions as a server. The conventional components of the computing platform, such as a CPU, memory, and the like are known to those skilled in the art and need not be described in greater detail herein. The telephone interface portion 138 may comprise an Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) to communicate with the central office switch 116. The ISDN PRI, which may be implemented on a plug-in computer card, provides information to the tele-

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phone interface portion 138, such as automatic number identification (ANI), dialed number identification service (DNIS), and the like. As is known, ANI provides the telephone number of the caller's telephone (e.g., the originating telephone 102) while the DNIS allows the number the caller dialed (e.g., the destination telephone 104) to be forwarded to a computer system. These data may be considered "keys" which may be used by the system 100 to identify the caller and the callee. Thus, the central office switch 116 provides information which may be used to access the affiliation list 150 for the destination telephone 104.

The Internet interface portion 140 may be conveniently implemented with a computer network card mounted in the same computing platform that includes the ISDN PRI card. However, it is not necessary for satisfactory operation of the system 100 that the interface cards be co-located in the same computing platform. It is only required that the telephone interface portion 138 communicate with the Internet interface portion 140. The Internet interface portion 140 receives the incoming data (e.g., the ANI, DNIS, and the like) and generates Internet compatible commands. The specific form of the Internet commands using, by way of example, TCP/IP, are within the scope of knowledge of one skilled in the art and need not be described herein. As will be described below, data provided by the central office switch 116 will be used to access data on the Internet and use that data to determine the manner in which a telephone call will be processed.

The Internet 134 stores an affiliation list 150, which may be established by the user of the destination telephone 104. Data stored within the affiliation list 150 is accessed by the central office switch 116 to determine the manner in which the call from the originating telephone 102 will be processed. Details of the affiliation list 150 are provided below. The Internet 134 also includes an Internet controller 152 which communicates with a callee computer 154 via a network link 156. The communication between the callee computer 154 and the Internet 134 is a conventional communication link used by millions of computers throughout the world. For example, the callee computer 154 may be a personal computer (PC) containing a communication interface, such as a modem (not shown). The network link 156 may be a simple telephone communication link using the modem to communicate with the Internet 134. The Internet controller 152 functions in a conventional manner to communicate with the callee computer 154 via the network link 156. Although the communication link 132 and the network link 156 are both communication links to the Internet, the network link 156 is a conventional computer connection established over a telephone line, a network connection, such as an Ethernet link, or the like. This conventional network link 156 is significantly different from the communication link 132 between the central office switch 116 and the Internet 134. The central office switch 116 establishes the communication link 132 to access data on the Internet and uses that accessed data to determine how to process an incoming call for the destination telephone 104. The network link 156 is a computer-to-computer connection that may simply use a telephone as the physical layer to establish the network link.

In the system 100, the central office switch 116 receives an incoming call from the originating telephone 102 via the central office switch 106 and, optionally, the LDC 124. Rather than immediately establishing the communication link 120 and generating a ring signal at the destination telephone 104, the central office switch 116 establishes the

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communication link 132 and communicates with the Internet 134 via the communication interface 136. The purpose of such communication is to access the affiliation list 150 and thereby determine the manner in which the user of the destination telephone 104 wishes calls to be processed.

FIG. 3 illustrates the system 100 for a telephone system configuration in which the originating telephone 102 and the destination telephone 104 are both serviced by the same local exchange carrier 108. The originating telephone 102 establishes the communication link 110 with the central office switch 106 in the manner described above. The central office switch 106 establishes the communication link 126 directly with the central office switch 116 without the need for the LDC 124 (see FIG. 2). The central office switch 116 operates in the manner described above. That is, the central office switch 116 does not immediately establish the communication link 132 with the Internet 134. For the sake of simplicity, FIG. 3 does not illustrate the communication interface 136. However, those skilled in the art will appreciate that the central office switch 116 accesses the affiliation list 150 via the communication interface 136 (see FIG. 2).

For the sake of simplicity, FIG. 3 also does not show the Internet controller 152 and the callee computer 154. However, those skilled in the art can appreciate that those portions of the system may also be present in the embodiment illustrated in FIG. 3. However, it should be noted that the callee computer 154 and the Internet controller 152 need only be used to edit the affiliation list 150. The call processing by the central office switch 116 does not depend on the presence of the Internet controller 152 or the callee computer 154. That is, the central office switch 116 accesses the affiliation list 150 via the communication interface 136 regardless of the presence of the callee computer 154.

In yet another telephone system configuration, illustrated in FIG. 4, the originating telephone 102 and the destination telephone 104 are not only serviced by the same local exchange carrier 108, but are connected to the same central office switch 116. However, the fundamental operation of the system 100 remains identical to that described above with respect to accessing the affiliation list 150. That is, the originating telephone 102 establishes the communication link 110 with the central office switch 116. However, the central office switch 106 need not establish the communication link 126 with any other central office switch since the destination telephone 104 is also connected to that same central office switch.

In this telephone system configuration, the central office switch 116 accesses the affiliation list 150 on the Internet 134 via the communication link 132 (see FIG. 2) in the manner described above. For the sake of simplicity, FIG. 4 does not illustrate the communication interface 136. However, those skilled in the art will recognize that the communication interface 136 operates to convert communication signals between telephone protocol used by the central office switch 106 and the Internet communication protocol used by the Internet 134. In addition, FIG. 4 also does not illustrate the Internet controller 152 and the callee computer 154. As noted above with respect to FIG. 3, the Internet controller 152 and callee computer 154 are not necessary for proper operation of the system 100. The callee computer 154 is typically used in the system 100 to edit the affiliation list 150.

The affiliation list 150 is illustrated in greater detail in the functional block diagram of FIG. 5. The affiliation list comprises a series of sublists, illustrated in FIG. 3 as a

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forward list 160, a reverse list 162, a block list 164, and an allow list 166. The forward list 160 contains a list of Internet subscribers whose Internet activity a user wishes to monitor. This list is sometimes referred to as a "buddy" list. When the user operates the callee computer 154 on the Internet 134, the Internet controller 152 accesses the forward list 160 via an affiliation list input/output (I/O) interface 170 to determine which Internet subscribers contained within the forward list are currently active on the Internet 134. In conventional Internet operation, the Internet controller 152 sends a message to the callee computer 154 indicating which Internet subscribers on the forward list 160 are currently active on the Internet 134.

The forward list 160 is a list of Internet subscribers whose activity is reported to the user. Other Internet subscribers may have their own forward list (not shown) and may monitor the Internet activity of the user. When the user accesses the Internet 134 with the callee computer 154, that activity can be monitored by others. With the system 100, it is possible to determine who is monitoring the user's Internet activity. The reverse list 162 contains a list of Internet subscribers who have placed the user in their forward list. That is, the reverse list 162 contains a list of Internet subscribers who have placed the user in their buddy list. With the reverse list 162, the user can determine who is monitoring his Internet activity.

The block list 164 contains a list of Internet subscribers that the user does not want to monitor his Internet activity. That is, the user's Internet activity will not be provided to any Internet subscriber contained in the block list 164. Thus, even if a particular Internet subscriber has placed the user on their forward list, the presence of that particular Internet subscriber's name on the block list 164 will prevent the user's Internet activity from being reported to the particular Internet subscriber. The use of the block list 164 provides certain security assurances to the user that their Internet activity is not being monitored by any undesirable Internet subscribers.

The allow list 166 contains a list of Internet subscribers for whom the user may wish to communicate with but whose Internet activity the user does not wish to monitor.

The system 100 combines the capabilities of the affiliation list 150 with telephone switching technology to filter incoming calls to the destination telephone 104. For example, the user may specify that only calls from Internet subscribers contained in the forward list 154 may contact the user via the destination telephone 104. Alternatively, the user may specify that a calling party whose name is contained in the forward list 160 or the allow list 166 may place a call to the destination telephone 104. As will be discussed in greater detail below, the system 100 allows the user to create general conditional processing, such as blocking calls or allowing calls. However, the user can also create specific conditional processing for individual callers or based on the user's current status or preferences.

The central office switch 116 accesses the affiliation list 150 via the communication link 132 and determines whether the calling party is in a list (e.g., the forward list 160) that the user wishes to communicate with. If the calling party is contained within an "approved" list, the central office switch 116 establishes the communication link 120 and sends a ring signal to the destination telephone 104. Thus, the user can pick up the telephone with the knowledge that the calling party is an individual with whom the user wishes to communicate.

Conversely, if the calling party is not contained within an approved list, such as the forward list 160 or the allow list

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166, the central office switch 116 will not establish the communication link 120 with the destination telephone 104. Thus, the user will not be bothered by undesirable phone calls. In one embodiment, the central switch office simply will not establish the communication link 120 and the calling party will recognize that the call did not go through. Alternatively, the central office switch 116 may generate a signal indicating that the destination telephone 104 is busy. In this alternative embodiment, the calling party will receive a busy signal on the originating telephone 102. Thus, the user has the ability to filter incoming calls by creating a list of those individuals with whom the user wishes to communicate.

It should be noted that the affiliation list 150 may be dynamically altered by the user to add or delete individuals, change individuals from one list to another, or to change the call processing options for a particular list depending on the user's preferences. For example, the user may want to accept all calls from any source at certain times of the day. Under these circumstances, the user can edit the allow list 166 to accept calls from any calling party. Alternatively, the user may still maintain the block list 164 such that calls will not be processed from certain specified parties even if the user is willing to accept calls from any other source. Under other circumstances, the user may not wish to communicate with any individuals. In this instance, the user may indicate that all calling parties are on the block list 164. Thus, the central office switch 116 will access the Internet 134 in real-time and review data in the affiliation list 150 to thereby process incoming calls for the user in accordance with the rules present in the affiliation list.

The discussion above provides examples of the central office switch 116 processing calls from a calling party in accordance with their presence or absence of certain lists in the affiliation list 150. For example, a call from a party on the forward list 160 will be connected to the destination telephone 104 (see FIG. 2) while a call from a party on the block list 164 will not be put through to the destination telephone. However, the system 100 also allows the selection of call processing options on an individual basis rather than simply on the presence or absence in a particular list. For example, the user can edit the allow list 166 to specify that certain individuals are "allowed" while other individuals may be allowed, conditionally allowed, or blocked all together. If the individual calling party has an associated status indicating that they are allowed, the central office switch 116 will process the incoming call and connect it to the destination telephone 104. If the individual calling party has an associated blocked status, the central office switch 116 will not process the call and will not connect it to the destination telephone 104.

Furthermore, the user may attach conditional status to individual callers or to calling lists. Conditional status may be based on factors, such as the time of day, current availability of the user, work status, or the like. For example, the user may accept calls from certain work parties during specified periods of the day (e.g., 9:00 a.m.-11:00 a.m.), block calls from selected calling parties during other periods of time (e.g., 12:00-1:00 p.m.), or allow calls during a business meeting only from certain calling parties (e.g., the boss). These conditional status criteria may be applied to individuals or to one or more lists in the affiliation list 150.

FIG. 6 illustrates sample data entries in the allow list 166. The allow list 166 may include data, such as a name, Internet subscriber name, and one or more phone numbers associated with the individual data entry. It should be noted that the calling party need not have an Internet subscriber name for

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proper operation of the system 100. That is, the central office switch 116 accesses the allow list 166 utilizing the calling party number and need not rely on any email addresses or other Internet subscriber identification for proper operation. The allow list 166 may also include an email alias in addition to or in place of the Internet subscriber name. Some Internet subscribers prefer to "chat" with other subscribers utilizing an alias rather than their actual Internet subscriber name. The data of FIG. 6 illustrates one possible embodiment for the allow list 166. However, those skilled in the art can appreciate that the allow list 166 may typically be a part of a large database (not shown). Database operation is well known in the art, and need not be described in greater detail herein. The database or other form of the forward list 160 may be satisfactorily implemented using any known data structure for storage of data. For example, the various lists (e.g., the allow list 166, the reverse list 162, the block list 164 and the allow list 166) may all be integrated within a single database structure. The present invention is not limited by the specific structure of the affiliation list 150 nor by the form or format of data contained therein.

Rather than incoming call filtering on the basis of presence in a particular list, such as the allow list 166, as illustrated in FIG. 6, the affiliation list 150 may contain status data on an individual basis. In this event, the central office switch 116 (see FIG. 2) processes the incoming call in accordance with the designated status for that individual. In the example illustrated in FIG. 7, the affiliation list 150 contains one individual with an "allowed" status, one individual with a "blocked" status, and one individual with a "conditional" status based on user-selected criteria. In the example of FIG. 7, the user-selected criteria may be based on the particular phone from which the call is originating as well as the time of day in which the call is originated. For example, the user may wish to allow all calls from a particular number, such as an caller's work number. However, calls from another number, such as the caller's home phone, may be blocked. Other calls, such as from a caller's cellular telephone, may be allowed only at certain times of day. FIG. 7 is intended to illustrate some of the call processing options that are available to the user. As can be appreciated, a variety of different conditional status criteria may be applied to one or more potential calling parties. However, a common feature of the system 100 is that the telecommunication system (e.g., the central office switch 116) determines calling party status on the basis of information stored on the Internet and processes the incoming call in accordance with the user-specified criteria. Moreover, the system 100 operates in real-time to process the incoming call in accordance with the user-specified criteria.

The Internet 134 may be conveniently used as a storage area for the caller specified criteria. The advantage of such data storage on the Internet is that the data is widely accessible to the user. This provides a convenient mechanism for entering new caller data or editing existing caller data. The user can access the affiliation list 150 with the callee computer 154 via the network link 156. In contrast, the central office switch 116 may access the affiliation list 150 via the communication link 132, which may typically be a high-speed communication link. In addition, FIGS. 2, 4, and 5 illustrate the central office switch 116 as the telecommunication component that accesses the Internet 134. It is convenient for operational efficiency to have the central office switch (e.g., the central office switch 116) to which the destination telephone 104 is connected perform such Internet access. It is at this stage of the telephone call processing that the telecommunication system may most conveniently

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determine the user-specified caller status. However, those skilled in the art will recognize that the status check may be performed by other portions of the telecommunication system, such as the central office switch 106, the LDC 124, or the like. Thus, the present invention is not limited by the particular telecommunication component that establishes the communication link with a network which the user-specified caller status data is stored.

In addition, the system 100 can be readily implemented as an "add-on" component of the telecommunication system and need not be integrated with the central office switch 116. For example, the conventional central office switch provides the ability to divert calls based on certain call conditions, such as "Call Forward No Answer," which may be used to divert an incoming call to voicemail or "Call Forward Busy," which may also divert the incoming call to voicemail. To implement the system 100 with an add-on processor, the system may optionally include a Switch to Computer Applications Interface (SCAI) 174 and a call processor 176. The dashed lines of FIG. 4 are intended to illustrate an alternative configuration of the system 100. This alternative configuration can also be implemented with other telephone system configurations, such as illustrated in FIGS. 2 and 3. The SCAI 174 is a telecommunication protocol that allows switches to communicate with external computers. Data, such as caller and callee telephone numbers, and status information, such as Call Forward Busy, are provided to the SCAI 174 by the central office switch 116.

The call processor 176 performs the functions described above to process the call in accordance with the user-specified criteria. That is, the call processor 176 receives caller and callee data from the SCAI 174 and accesses the affiliation list 150 via the communication interface 136 (see FIG. 2). The call processor 176 uses user-specified call processing criteria to generate instructions for the central office switch 116. The instructions are provided to the central office switch 116 via the SCAI 174. Those skilled in the art will appreciate that the SCAI 174 is but one example of the "Open Application Interface (OAI)" that can be used with the central office switch 116.

As noted above, the system 100 can process a call intended for the destination telephone 104, block a call, or generate a busy signal at the originating telephone 102. However, the system 100 also operates with voicemail and permits a number of different customized outgoing messages. FIG. 4 illustrates a voicemail system 180 having a storage area containing one or more outgoing messages 182. For example, the voicemail system 180 can play an outgoing message 182 informing the caller that "the party you are calling only accepts calls from designated callers. Please leave a message." If calls are blocked only at certain times, the outgoing message 182 can say "the party you are calling does not accept calls between 11:30 a.m. and 1:00 p.m. Please leave a message or call back after 1:00 p.m." The outgoing message can also reflect callee availability by playing a message such as "The party you are calling is in a meeting. Please leave a message or call back in X minutes" where X reflects the amount of time before the meeting is expected to end. That information can be manually provided to the affiliation list 150 by the user or automatically derived from a computerized scheduling program on, by way of example, the callee computer 154 (see FIG. 2).

Computerized scheduling programs, such as Microsoft® D Schedule Plus, can be used on the callee computer 154 (see FIG. 2). It is known that such scheduling programs can be accessed via a computer network or downloaded to a hand-held computing device to track appointments. The

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system 100 can access such computerized scheduling programs and download appointments and scheduled meetings into the affiliation list 150. The outgoing messages 182 can be automatically selected on the basis of the user's computerized schedule. Thus, the system 100 permits the user to schedule his day (e.g., meetings, lunch time, in office/available for calls, in office/unavailable for calls, etc.) on a computerized scheduling program and to process calls in accordance with the computerized schedule and even select outgoing messages automatically based on the user's schedule.

The operation of the system 100 is illustrated in the flowchart of FIG. 7. At a start 200, the calling party has placed a call from the originating telephone 102 (see FIG. 2) to the destination telephone 104. In step 202, the central office switch 116 has received call data from the originating telephone 102. The received call data includes the destination telephone number of the destination telephone 104 and identification data indicating the originating telephone 102 as the source of the present call. Use of automatic number identification (ANI) is a well-known technique for providing identification data indicating the originating telephone 102 as the source of the present call. While the specific implementation of ANI data, sometimes referred to as caller ID, may not be uniformly implemented throughout the United States, the ANI data is typically delivered between the first and second rings. In the present invention, the central office switch 116 (see FIG. 2) does not initiate a ring signal to the destination telephone 104 until after determining the status of the calling party based on the ANI. In future implementations, telecommunication companies may transmit other forms of caller identification, such as caller name, Internet address, email alias, or the like. The system 100 operates satisfactorily with any form of caller identification. The only requirement for the system 100 is that some form of caller identification be provided. The call is processed in accordance with the user-specified criteria in the affiliation list 150 for the identified caller.

In step 204, the central office switch 116 (see FIG. 2) establishes the communication link 132 with the Internet 134. Although step 204 illustrates the system 100 as actively establishing the communication link 132 with the Internet 134, those skilled in the art will recognize that the system 100 can utilize a continuous high-speed data link between the central office switch and the Internet. Thus, it is not necessary to establish a network link for each and every incoming call processed by the central office switch 116. As previously described, the communication interface 136 translates data between the telephone protocol and the Internet protocol. In step 206, the system 100 accesses the affiliation list 150 for the user (i.e., the called party). In an exemplary embodiment, the telephone number of the destination telephone 104 or other callee identification is used as an index or pointer to a specific location within the database where the affiliation list 150 for the particular user may be found. Database operation in general, and techniques for locating specific items within a database in particular are known to those skilled in the art and need not be described herein.

In decision 210, the system 100 determines whether the caller identification data is on the forward list 160 (see FIG. 3). If the caller identification data is present in the forward list, the result of the decision 210 is YES. In that event, the system 100 proceeds to FIG. 6B where the call is processed in accordance with the rules associated with the forward list 160.

If the caller identification data is not present in the forward list 160 (see FIG. 3), the result of decision 210 is

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NO. In that event, the system 100 moves to decision 212 to determine whether the caller identification data is in the allow list 166. If the caller identification data is present in the allow list 166, the result of decision 214 is YES. In that event, the system 100 proceeds to decision 216 where the call is processed in accordance with the rules associated with the allow list 166. If the caller identification data is not present in the allow list 166, the result of decision 216 is NO.

In decision 218, the system 100 determines whether the caller identification data is present in the reverse list 162. If the caller identification data is present in the reverse list 162, the system 100 proceeds to the step 220 where the call is processed in accordance with the rules associated with the reverse list 162. If the caller identification data is not present in the reverse list, the result of decision 218 is NO. In that event, the system moves to decision 216 to determine whether the caller is present on the block list 164. If the caller is present on the block list 164, the result of decision 222 is YES. In that event, the system proceeds to step 224 where the call is processed in accordance with the rules associated with the block list. If the caller identification data is not present in the block list 164, the result of decision 222 is NO. This indicates that the caller identification data is not present in any of the user-specified lists in the affiliation list 150. In that event, the system moves to step 226 where the call may be processed in accordance with user-specified rules of processing anonymous or unidentified calls. The flowchart of FIG. 8 illustrates the operation of the system 100 with multiple lists wherein the call processing rules are designated for each list. In this embodiment, the call is processed on the basis of the presence or absence of the caller identification data in a particular list. However, as previously discussed, the affiliation list 150 (see FIG. 5B) may include user-specified status criteria for individual callers. In this embodiment, the system 100 processes the call on the basis of the user-specified status criteria associated with the individual caller rather than on the basis of the caller's presence or absence in a specific list. In that event, the system 100 may simply access the user affiliation list (see step 206 in FIG. 7) and process the call in accordance with the user-specified status criteria for the individual caller. If the caller identification data is not present in the affiliation list 160, the call may be processed using user-specified call processing criteria for unidentified callers, as shown in step 226.

Thus, the system 100 allows the user to specify call processing rules for a plurality of different caller lists or for individual callers within a list. The caller lists may be readily edited in accordance with the changing desires of the user. The user may alter the call processing rules in accordance with various times of day, work conditions, or even the personal mood of the user. For example, the user may process all calls during certain times of the day, such as when the user is at work. However, when the user arrives home, subsequent calls may be processed in accordance with a different set of rules, such as accepting no calls during dinner time or after a certain time at night.

These rules may be applied differentially to different ones of the list in the affiliation list 150. For example, the user may accept calls from any calling party on the forward list 160 (see FIG. 3) or the allow list 166 during the evening hours. However, after a certain time at night, the caller may accept calls only from calling parties on the forward list 160. Thus, the system 100 allows great flexibility in the user selection of calling rules and lists. The system 100 allows the user to filter incoming calls in accordance with generalized rules or in accordance with highly specific rules.

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In addition to filtering incoming calls to the destination telephone 104, the system 100 can monitor the status or activity of both the caller and the callee and establish a communication link between the originating telephone 102 and the destination telephone 104 when the status data indicates that both the caller and callee are available for a telephone conversation. The system 100 has been previously described with respect to callee status monitoring and processing of incoming calls in accordance with the user-selected (i.e., the callee-selected) call processing criteria. Similar status monitoring can be performed for the caller. As illustrated in FIG. 9, the system 100 may include a caller computer 184, which is coupled to the Internet via the communication link 132. For the sake of clarity, FIG. 9 illustrates the callee computer 154 and the caller computer 184 as connected to the Internet 134 through a single Internet controller 152. However, those skilled in the art will appreciate that the Internet 134, or any computer network, includes many network controllers that function as a gateway to the network. Thus, the system 100 typically includes a large number of Internet controllers 152.

In addition, for the sake of clarity, Figure illustrates only a single affiliation list 150. However, those skilled in the art will appreciate that separate affiliation lists exist for the originating telephone 102 and the destination telephone 104. The central office switch 116 (or the call processor 176) access the appropriate affiliation list via the network connection 132 and apply the appropriate call processing rules for each telephone.

FIG. 9 also illustrates a keyboard 154a and mouse 154b coupled to the callee computer 154 for use in a conventional fashion. Similarly, the caller computer 184 includes a keyboard 184a and a mouse 184b. The computer operating system, such as the Windows® operating system, is capable of monitoring user activity on the computer. For example, the operating system on the callee computer 154 can detect user activity on the keyboard 154a or the mouse 154b. By monitoring this activity, the operating system can determine the user's status and activate certain software programs, such as a screen saver, when no user activity has been detected for a certain period of time. Under these circumstances, the operating system may determine that the callee computer 154 has entered an "idle" state. Similarly, operating system on the caller computer 184 may perform similar functions to determine user activity on the caller computer. Using the principles of the present invention, the callee computer 154 and the caller computer 184 may report the current status to the affiliation list 150 for each respective computer.

The system 100 can monitor computer activity and generate signals to both the originating telephone 102 and the destination telephone 104 when the callee computer 154 and the caller computer 184 are not in the idle state. The fact that both computers are not in the idle state indicates that the users of each respective computer may be available for a telephone conversation. In addition, the system 100 can apply call processing rules that may also govern operation of the telephone portion of the system 100. For example, the callee computer 154 may be in an "active" state (as opposed to the idle state) but the user has indicated that he should not be disturbed at the present time. Thus, the central office switch 116 or the call processor 176 accesses the affiliation list 150 for the destination telephone 104 to determine the callee-selected call processing criteria. In addition, the central office switch 116 or the call processor 176 can access the affiliation list 150 for the caller and apply any caller-selected call processing rules. For example, the caller computer 184

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may be in the active state, but the caller status in the affiliation list 150 may indicate that the caller is in a meeting and is, therefore, unavailable for a telephone call with the callee. In this manner, the system 100 can monitor computer activity and determine when the caller and callee may both be available for a telephone call and further applies call processing criteria for both the caller and callee. The call processing criteria for the caller and callee as well as the current status of the callee computer 154 and the caller computer 184 are stored within the respective affiliation lists 150 on the Internet 134. This data may be accessed by the central office switch 116 or the call processor 176 via the network connection 132 in the manner previously described.

In operation, the system allows a caller to indicate a desire to establish a telephone communication link with a specified callee. The caller can use the originating telephone 102 or the caller computer 184 to initiate the call processing by the system 100. The system 100 monitors the caller and callee activities and call processing rules and, when appropriate for both parties, establishes a telephone communication link by sending signals from the central office switch 116 to the originating telephone to generate a ring signal. The central office switch 116 also generates appropriate signals to generate ring signal at the destination telephone 104.

As can be appreciated, the originating telephone 102 communicates with the central office switch 116 using the communication link 110 while the caller computer 184 communicates with the Internet 134 using the communication link 132. The communication link 132 may be a second telephone line, a network connection, such as an Ethernet connection, or the like. If the user has two telephone lines, the telephone number of the telephone (e.g., the destination telephone 104) can be different from the telephone number associated with the computer (e.g., the callee computer 154). However, the system 100 must be aware of an association between the telephone and the computer. This is particularly important if the status of the computer (i.e., idle or active) is used as one of the call processing criteria. The system 100 can monitor the activity of a computer (e.g., the callee computer 154) in order to establish a telephone communication link with an associated telephone (e.g., the destination telephone 104). It is of no value to monitor a user's computer status at one location and call a completely unrelated telephone at a different location. For example, it is of no value to monitor the callee's computer at work and then to call the callee's home telephone number.

In other implementations, such as with a home computer, only a single telephone line may serve the function of both the communication link 110 and the communication link 132. Under these circumstances, the caller may use the caller computer 184 to indicate a desire to establish the telephone communication link and then must terminate the communication link 132 so that the central office switch may generate the appropriate signals on the communication link 110 at a point in time when the callee call processing criteria and the caller call processing criteria are both met. It should be further noted that this implementation will preclude the use of the status (i.e., idle or active) of the caller computer 184 since the communication link 132 is not active.

Similarly, the destination telephone 104 and the callee computer 154 may be connected to the central office switch 116 and the Internet 134 via separate communication links (i.e., the communication link 120 and the communication link 132, respectively). However, the system 100 may also be implemented with a single phone line. The callee may use the callee computer 154 and the communication link 132 to generate or edit the callee call processing criteria in the

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affiliation list 150. However, the user must then terminate the communication link 132 to permit the central office switch 116 to establish the communication link 120. As noted above, a single phone line precludes the use of computer status monitoring (i.e., idle or active) for the callee computer 154 since the status cannot be monitored via the communication link 132.

The operation of the system 100 to establish a communication link with both the originating telephone 102 and the destination telephone 104 is illustrated in the flowchart of FIG. 10 where, at a start 250, it is assumed that the caller and callee both have data in their respective affiliation lists. As previously noted, the affiliation list 150 for each individual may comprise separate sublists, such as illustrated in FIG. 5, or a single data structure containing call processing criteria, such as allowing or blocking individual calls (see FIG. 7) or establishing conditional criteria, such as time restrictions, current user status (e.g., in a meeting), or the current status of the user's computer (e.g., the idle or active status of the callee computer 154). Furthermore, as previously noted, user status can be automatically provided to the affiliation list 150 by a computerized schedule program.

In step 252, the caller indicates a desire to establish a telephone communication link with the callee. In a conventional communication system, the caller picks up the originating telephone and dials the telephone number for the destination telephone 104. However, in accordance with this aspect of the system 100, the caller may indicate the desire to establish a telecommunication link using the caller computer 184 and placing the callee telephone number (i.e., the telephone number of the destination telephone 104) on a call list, such as the forward list 160 (see FIG. 5). By placing the callee on the forward list, the system 100 can access the callee affiliation list to determine whether the callee computer 154 is active on the Internet.

With the callee telephone number (i.e., the telephone number of the destination telephone 102) placed on the call list, the system 100 can determine the call processing criteria of both the caller and the callee, and process the request for a telephone call in accordance with those rules. In step 254, the system 100 establishes a communication link with the Internet 134. As previously noted, the central office switch 116 may directly establish the communication link 132 with the Internet 134 or may use the SCAI 174 and call processor 176 to communicate with the Internet. It should be noted that the telephone portion of the system may have a continuous data link with the Internet via the central office switch 116 or the call processor 176. Thus, it is not necessary to continuously establish and tear down the communication link 132.

In step 258, the system 100 accesses the callee affiliation list 150. In step 260, the system 100 accesses the caller affiliation list 150. As previously noted, the physical location of each affiliation list is unimportant to the satisfactory operation of the system. The only requirement is that the affiliation list is accessible via the computer network, such as the Internet 134.

In decision 262, the system 100 applies the callee call processing criteria and determines whether the present calling conditions meet the callee criteria. This includes testing whether the caller is contained within one of the sublists illustrated in FIG. 5 or if the status associated with the call origination data indicates that the caller is allowed or blocked, or the like. If the present calling conditions do not meet the callee criteria, the result of decision 262 is NO. In that event, the system 100 can return to step 258 to again

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access the callee affiliation list. As those skilled in the art can appreciate, the callee affiliation list may be updated by the callee (typically via the callee computer 154) which may change the result of decision 262.

If the current call does meet the callee call processing criteria, the result of decision 262 is YES. In that event, the system 100 uses the data from the caller affiliation list 150 to determine whether the present call meets the caller call processing criteria. Although the caller indicated a desire to establish a telephone link with the callee, the caller may not be available for an immediate phone call. For example, the caller may have a meeting scheduled to begin, but expects to be available for a phone call following the meeting. The caller can manually set the call processing criteria, such as indicating the desired time of the telephone call. Alternatively, the caller call processing criteria may be automatically supplied to the caller affiliation list 150 through the use of a computerized scheduling program or the like. The system 100 may also monitor the status of the caller computer 184 to determine caller availability. For example, the caller may indicate an availability for a phone call after a predetermined time. The system 100 can detect the change in the state of the caller computer 184 from the idle state to the active state and interpret that as an indication that the caller is now available for a telephone call. The system can apply these conditions individually or in various combinations to determine the availability of the caller and callee. If the call does not meet the caller call processing criteria, the result of decision 264 is NO. In that event, the system 100 can return to step 258 to access the affiliation lists for the callee and caller, respectively, and thus continuously monitor the callee and caller call processing criteria to determine an appropriate time to make a phone call.

If the call does meet the caller call processing criteria, the result of decision 264 is YES. In that event, in step 266 the system 100 causes the central office switch 116 to send the appropriate ring signals to the originating telephone 102 and ring signals to the destination telephone 104. In this manner, the telephone system follows the call processing guidelines of both caller and callee stored on a computer network to control the processing of the call on the telephone network.

Although the example illustrated in FIG. 10 illustrates a continuous process of checking call processing criteria against the current call conditions, those skilled in the art appreciate that other possible actions can be taken by the system 100. For example, the caller may be on the block list 164 (see FIG. 5). In this condition, the call will never meet the callee call processing criteria. The system 100 thus will never establish a communication link. The system 100 can send a message to the caller computer 184 indicating that the callee does not accept calls in this manner and to leave a message on the voicemail system 180. Alternatively, the system 100 can establish a telephone communication link to the originating telephone 102 and provide a similar message. As discussed above with respect to FIG. 4, a variety of voice mail messages can be provided to the user. The system 100 may establish a telephone communication link to the originating telephone 102 and play the appropriate outgoing message 182 (see FIG. 4). As noted above, the system 100 can apply call processing rules derived from any source, such as the current status (e.g., idle or active) of the callee computer 154 or the caller computer 184, the presence or absence on one of the sublists in FIG. 5 (e.g., the block list 164), the status of one party (e.g., the allowed status of the caller), callee or caller status data provided by computerized scheduling systems, or the like. The system 100 advantageously allows multiple forms of call processing criteria to

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be stored in the network, such as the Internet 134, and accessed by the telephone system, such as the central office switch 116 or the call processor 176. Those skilled in the art will also recognize that the embodiment of the system 100 shown in FIG. 9 can be implemented with various telephone system configurations, such as those illustrated in FIGS. 2 and 3, or any other telephone system configuration. Furthermore, the system 100 is not limited by the specific component of the telephone system that establishes the network link 132 with the affiliation list 150. Although FIG. 9 illustrates the central office switch 116 or the call processor 176 as the component that establishes the network link, those skilled in the art will recognize that other components, such as the central office switch 106 (see FIG. 2), the LDC 124, or the like can establish the network link 132. Thus, the system 100 is not limited by the specific component of the telephone communication system that establishes the network link 132.

From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. For example, the system discussed herein uses, by way of example, the Internet 134 to store the affiliation list 150. However, the system 100 can be implemented with other computer networks or as a portion of a telephone switch, such as the central office switch 116. The telephone service provider can provide a customer with an affiliation list and some means to control the list as a value-added telephone service. The central office switch 116 accesses the internal affiliation list and processes the incoming calls in accordance with the user-specified criteria contained therein. Accordingly, the invention is not limited except as by the appended claims.

What is claimed is:

1. In a system that includes a telephone network and a computer network with one or more users, wherein each user is connected through a user computer the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, comprising:

- at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;
- at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;
- at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;
- at the computer network, using the set of a pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party; and
- using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

2. A method as recited in claim 1, further comprising, at the computer network, monitor activity of a user computer

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connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

3. A method as recited in claim 1, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

4. A method as recited in claim 1, wherein the predetermined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

5. A method as recited in claim 1, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer.

6. A method as recited in claim 1, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

7. In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, at least one of whom is a user connected to said computer network, and wherein said method comprises:

at the computer network, receiving information from the telephone network that a first party from whom a call is originating desires to establish telephone communication with a second party;

at the computer network, monitoring activity of a user computer connected to the computer network and associated with the second party;

at the computer network, storing a set of predetermined rules for determining when the second party is available to take a call from the first party; and
at the computer network, using the set of predetermined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computer of the second party, to determine when the second party is available to take the call originated by the first party.

8. A computer program product as recited in claim 7, wherein the method further comprises using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

9. A computer program product as recited in claim 7, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

10. A computer program product as recited in claim 7, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

11. A computer program product as recited in claim 7, wherein the method further comprises, at the computer network, monitoring activity of a user computer connected to the computer network and associated with the first party, wherein using the set of pre-determined rules is also performed using information regarding the monitored activity of the user computer of the first party.

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12. In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, comprising:

at the computer network, monitoring activity of the user computers associated with both a first and a second party;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party;

at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party; and

using the information processed at the computer network to facilitate connecting the call originated by the first party through the telephone network to the second party.

13. A method as recited in claim 12, wherein using the information processed at the computer network to facilitate connecting the call comprises sending control signals to the telephone network to cause the telephone network to connect the call.

14. A method as recited in claim 12, wherein the predetermined rules are associated with an affiliation list of the second party and wherein the first party is referenced by the buddy list.

15. A method as recited in claim 12, wherein monitoring activity of a user computer connected to the computer network and associated with the second party comprises monitoring activity of an input device of the user computer associated with the second party.

16. A method as recited in claim 12, wherein the pre-defined rules specify whether the second party accepts telephone calls from the first party.

17. In a system that includes a telephone network and a computer network with one or more users, and wherein each user is connected through a user computer to the computer network and is logically connected through the computer network to the telephone network, a computer program product comprising:

a computer readable medium for carrying computer executable instructions for implementing at the computer network a method of determining when to establish telephone communication between two parties, each of whom is a user connected to said computer network, wherein said method comprises:

at the computer network, monitoring activity of the user computers associated with both the first and second parties;

at the computer network, receiving information from the telephone network that the first party is originating a call to the second party;

at the computer network, storing a set of pre-determined rules for determining when the second party is available to take a call from the first party; and

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at the computer network, using the set of pre-determined rules to process i) the information received from the telephone network regarding the call being originated by the first party, and ii) information regarding the monitored activity of the user computers of the first and second parties, to determine when the second party is available to take the call originated by the first party.

18. A computer program product as recited in claim 17, wherein the method further comprises using the information processed at the computer network to facilitate connecting

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the call originated by the first party through the telephone network to the second party.

19. A computer program product as recited in claim 17, wherein the pre-determined rules specify whether the second party accepts telephone calls from the first party.

20. A computer program product as recited in claim 17, wherein the pre-determined rules define how the telephone call is to be processed based on the time of the day of the telephone call.

* * * * *

Exhibit

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US006421439B1

(12) **United States Patent**
Liffick

(10) Patent No.: **US 6,421,439 B1**
(45) Date of Patent: **Jul. 16, 2002**

(54) **SYSTEM AND METHOD FOR USER AFFILIATION IN A TELEPHONE NETWORK**

(75) Inventor: **Stephen Mitchell Liffick**, Seattle, WA (US)

(73) Assignee: **Microsoft Corporation**, Redmond, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/275,689

(22) Filed: **Mar. 24, 1999**

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(52) U.S. Cl. 379/211.02; 379/201.02; 709/328

(58) Field of Search 379/201.01, 201.02, 379/201.03, 188, 196, 197, 198, 199, 200, 210.02, 210.03, 211.01, 211.02, 900; 370/352; 709/311, 312, 320, 328

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* cited by examiner

Primary Examiner—Ahmad F. Matar

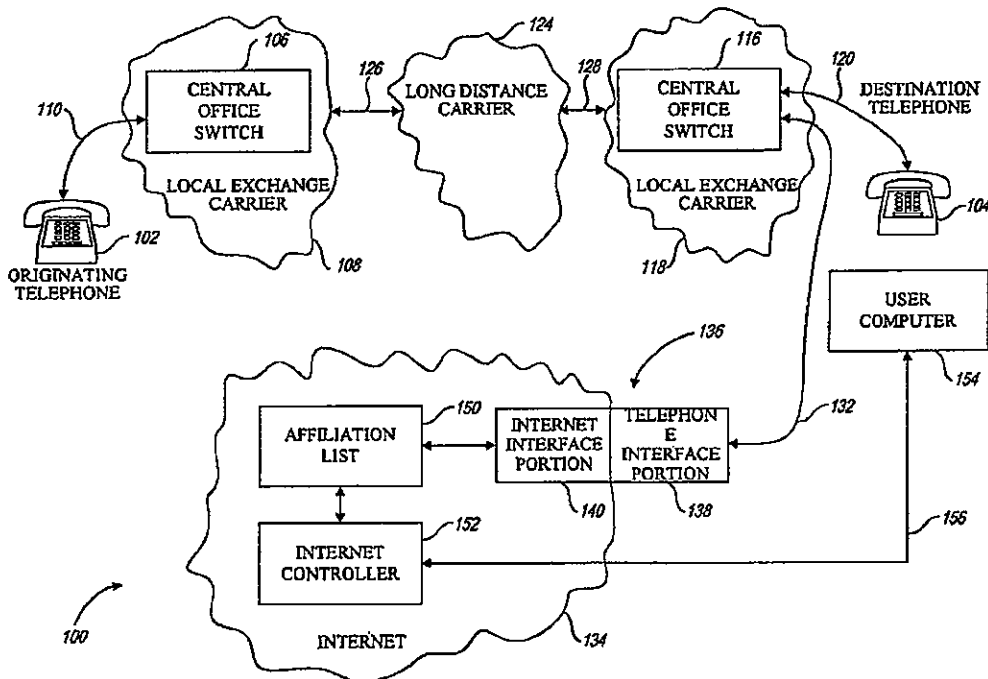
Assistant Examiner—Benny Q. Tieu

(74) *Attorney, Agent, or Firm*—Workman, Nydegger, Seeley

(57) **ABSTRACT**

A telecommunication system combines telephone technology and Internet technology to establish one or more user-specified affiliation lists. The affiliation lists are stored on the Internet and are accessible by the user and by the telecommunication portion of the system. The affiliation lists are used to process incoming calls to the user's destination telephone number. A central office switch receives the call being directed to the destination telephone number and uses a communication link with the Internet to access the user's affiliation lists. The incoming call is processed in accordance with the user-specified rules in the affiliation lists. The user may accept all incoming calls, no incoming calls, or incoming calls only from specified parties. The call processing rules may be readily edited by the user and can also include alternative call processing rules that vary in accordance with the time of day or with the user's personal desires.

51 Claims, 8 Drawing Sheets



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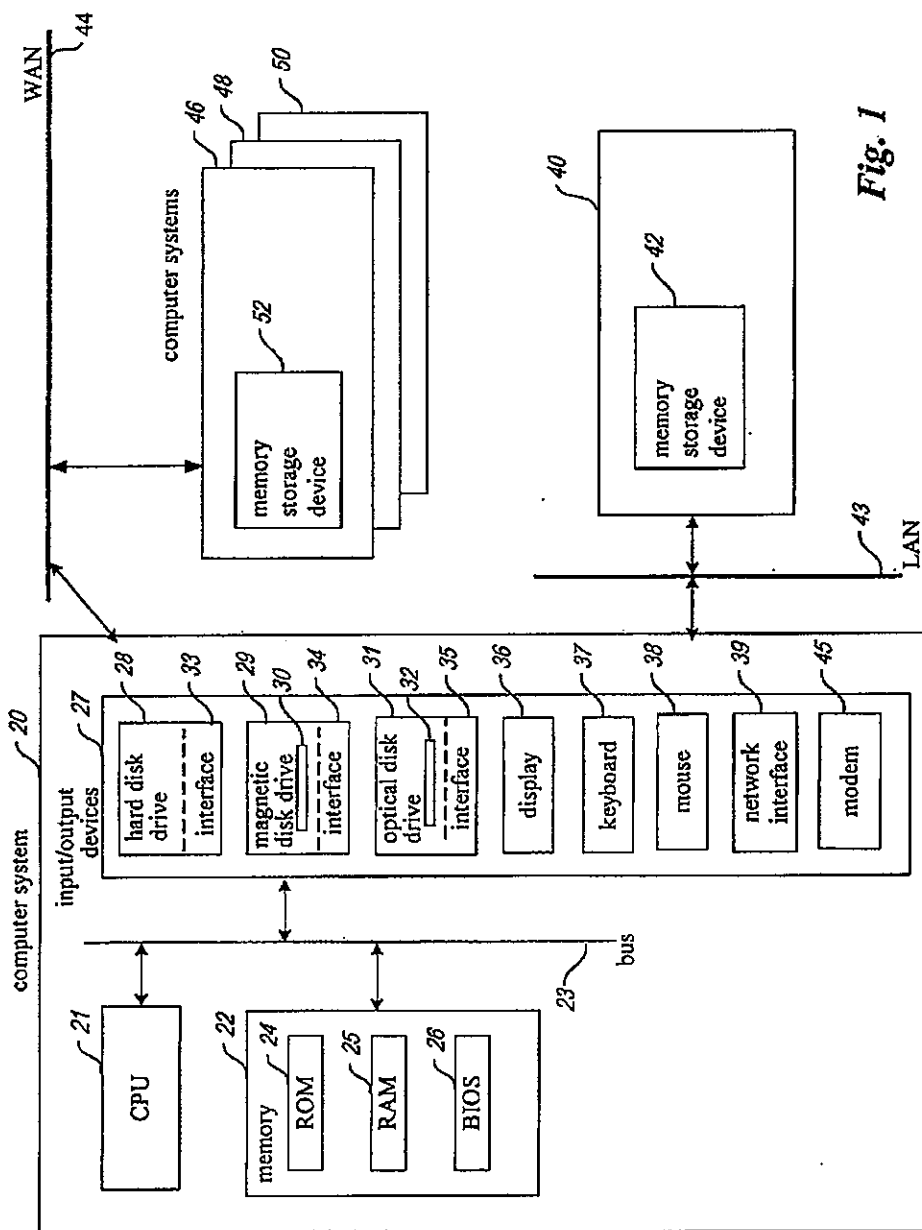


Fig. 1

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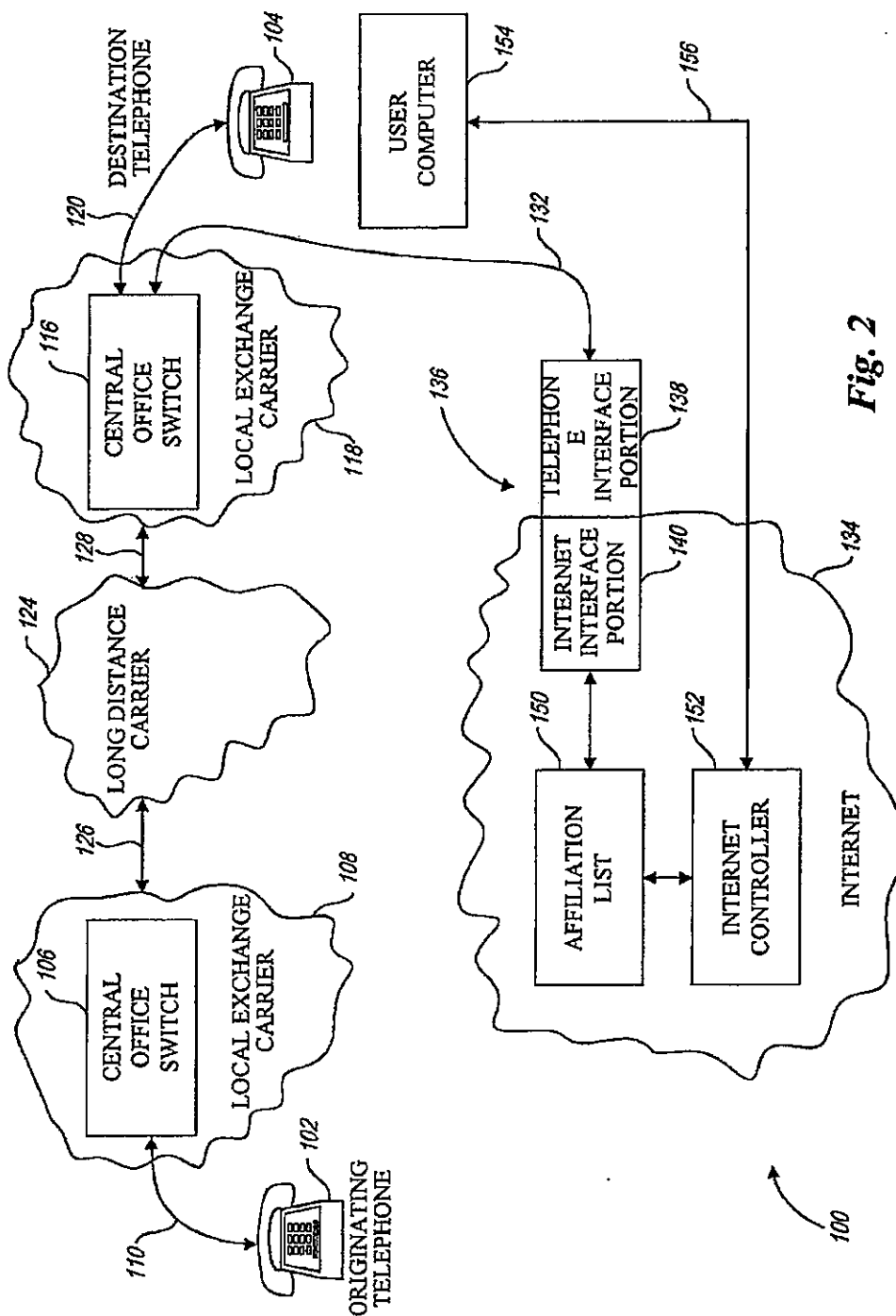


Fig. 2

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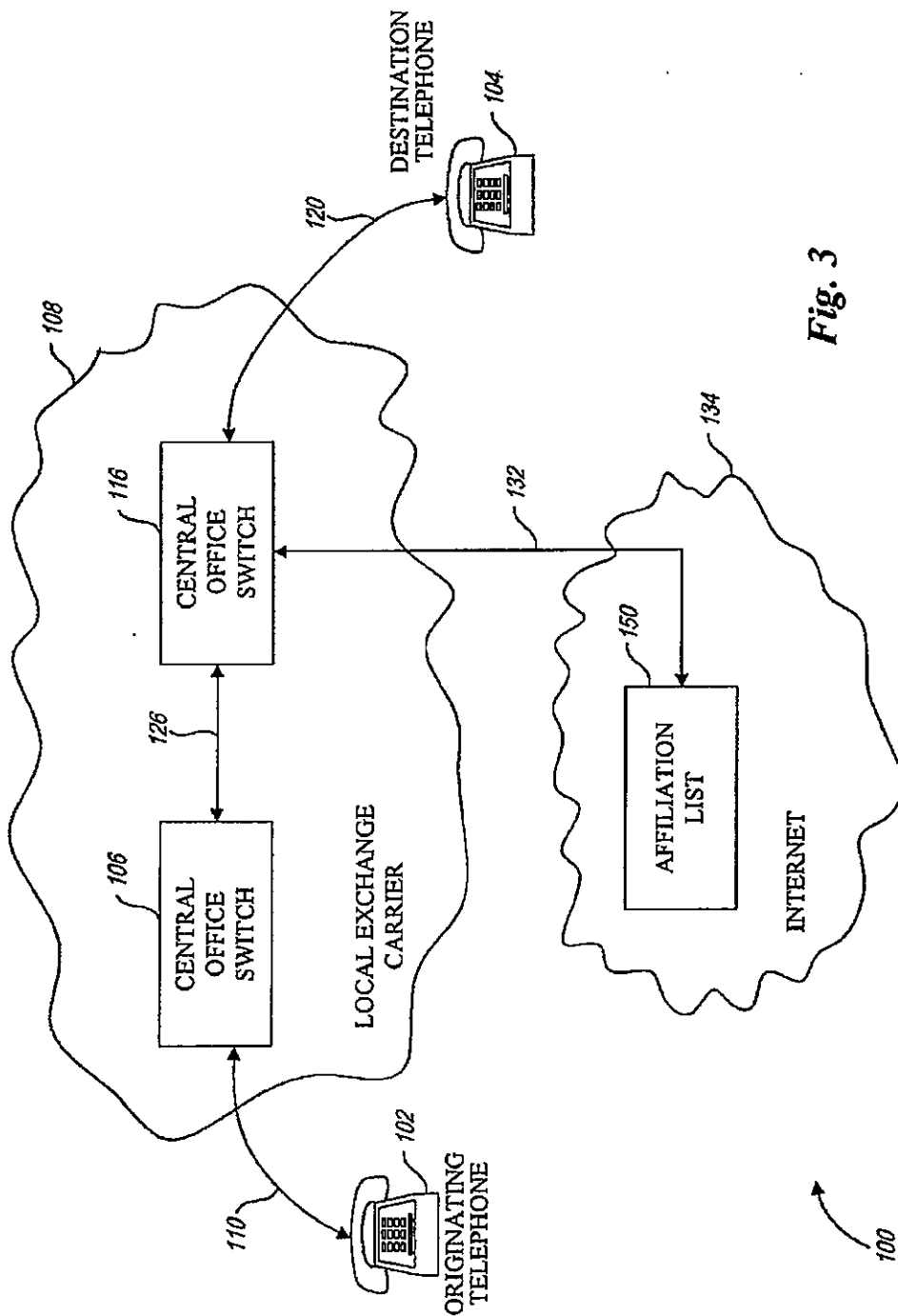


Fig. 3

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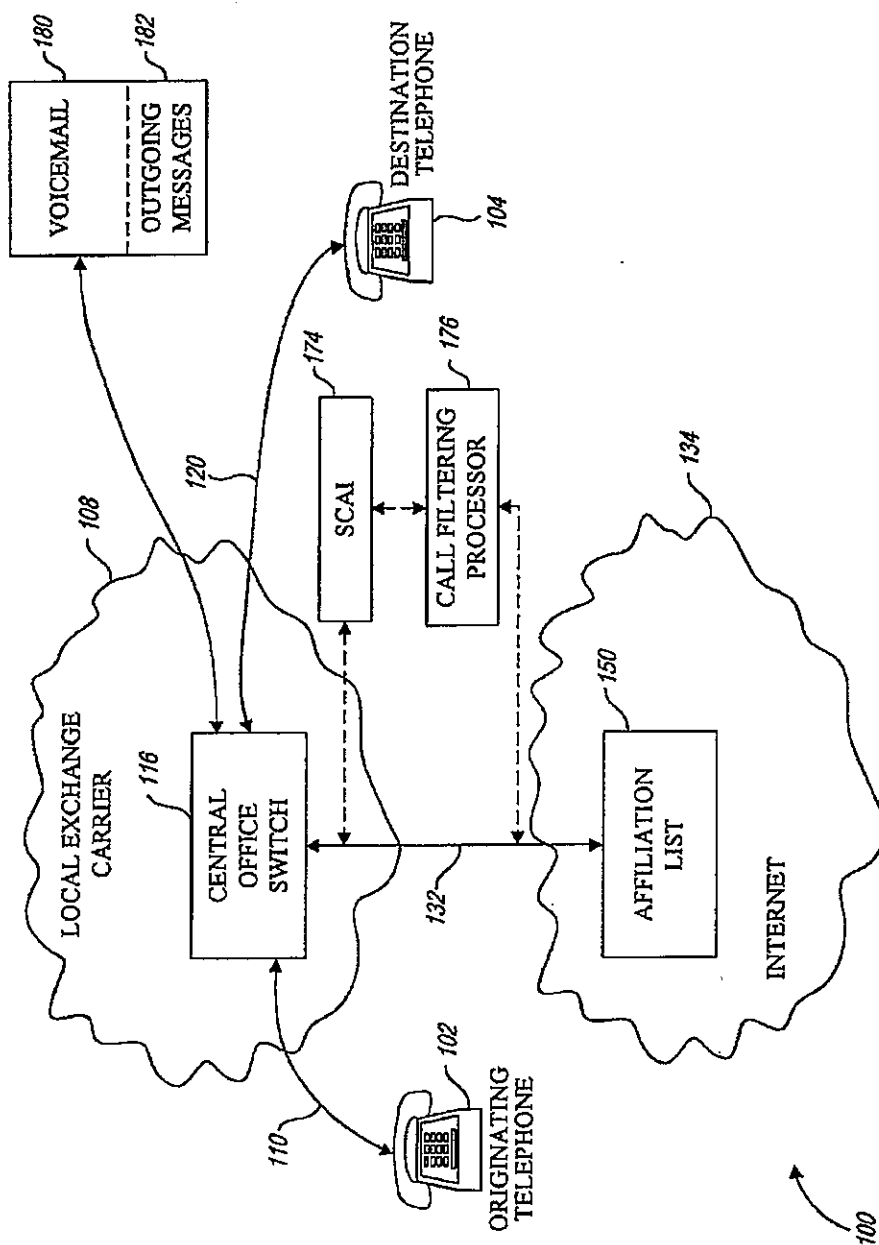


Fig. 4

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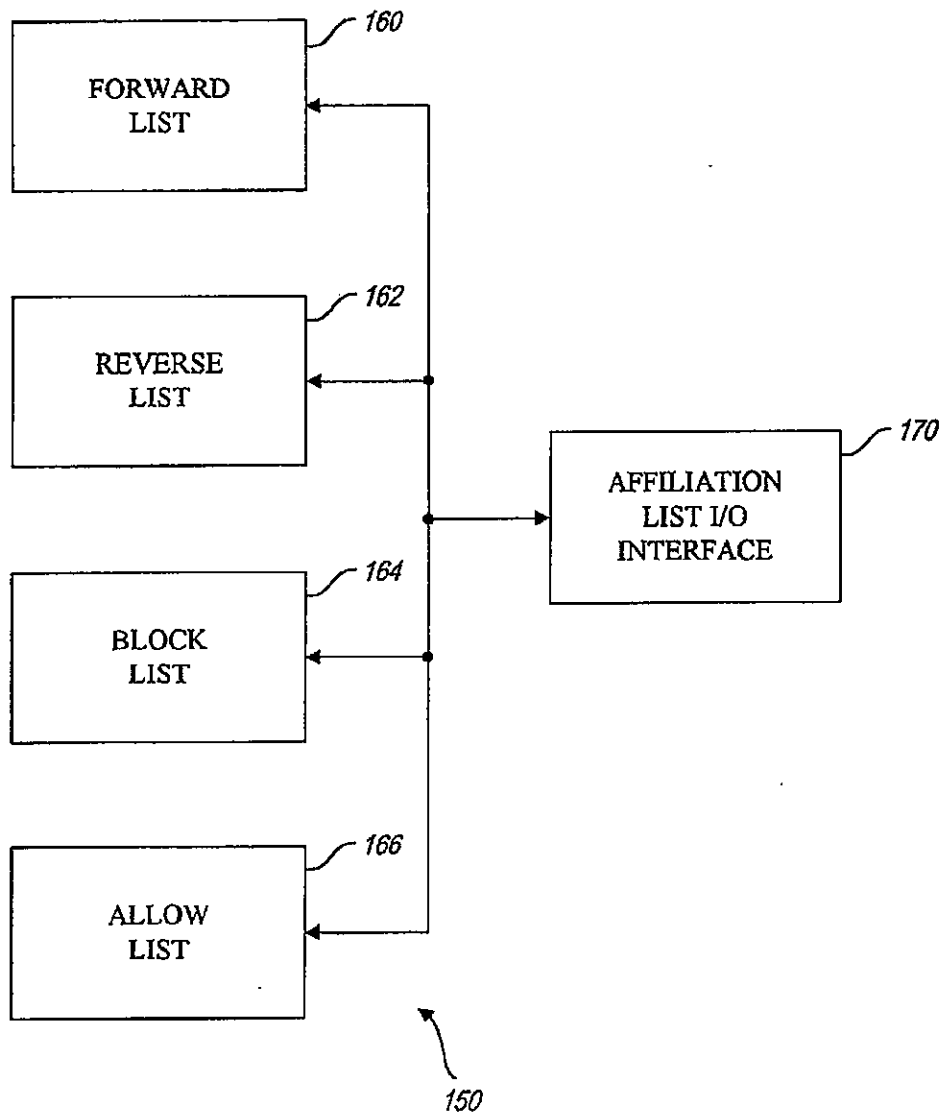


Fig. 5

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Name	Bob Smith
Subscriber Name	bobxyz@insn.com
Phone 1	(425) 555-1234
Phone 2	(425) 555-1235
.	
.	
.	
.	
.	
Name	Jim Smith
Subscriber Name	NONE
Phone 1	(206) 555-1236
.	
.	
.	
.	
.	
Name	John Adams
Subscriber Name	johnxyz@aol.com
Email Alias	atom smasher xyz
Phone 1	(703) 555-1237
Phone 2	(703) 555-1238
Phone 3	(703) 555-1239

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Fig. 6

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Name	Bob Smith
Subscriber Name	bobxyz@msn.com
Phone 1	(425) 555-1234
Phone 2	(425) 555-1235
Status	Allowed
.	
.	
.	
Name	Jim Smith
Subscriber Name	NONE
Phone 1	(206) 555-1236
Status	Blocked
.	
.	
.	
Name	John Adams
Subscriber Name	johnxyz@aol.com
Email Alias	atom snasher xyz
Phone 1	(703) 555-1237
Phone 2	(703) 555-1238
Phone 3	(703) 555-1239
Status	Conditional
Phone 1	- Allowed
Phone 2	- Allowed 9:00 a.m. - 11:30 a.m.
Phone 3	- Blocked

150

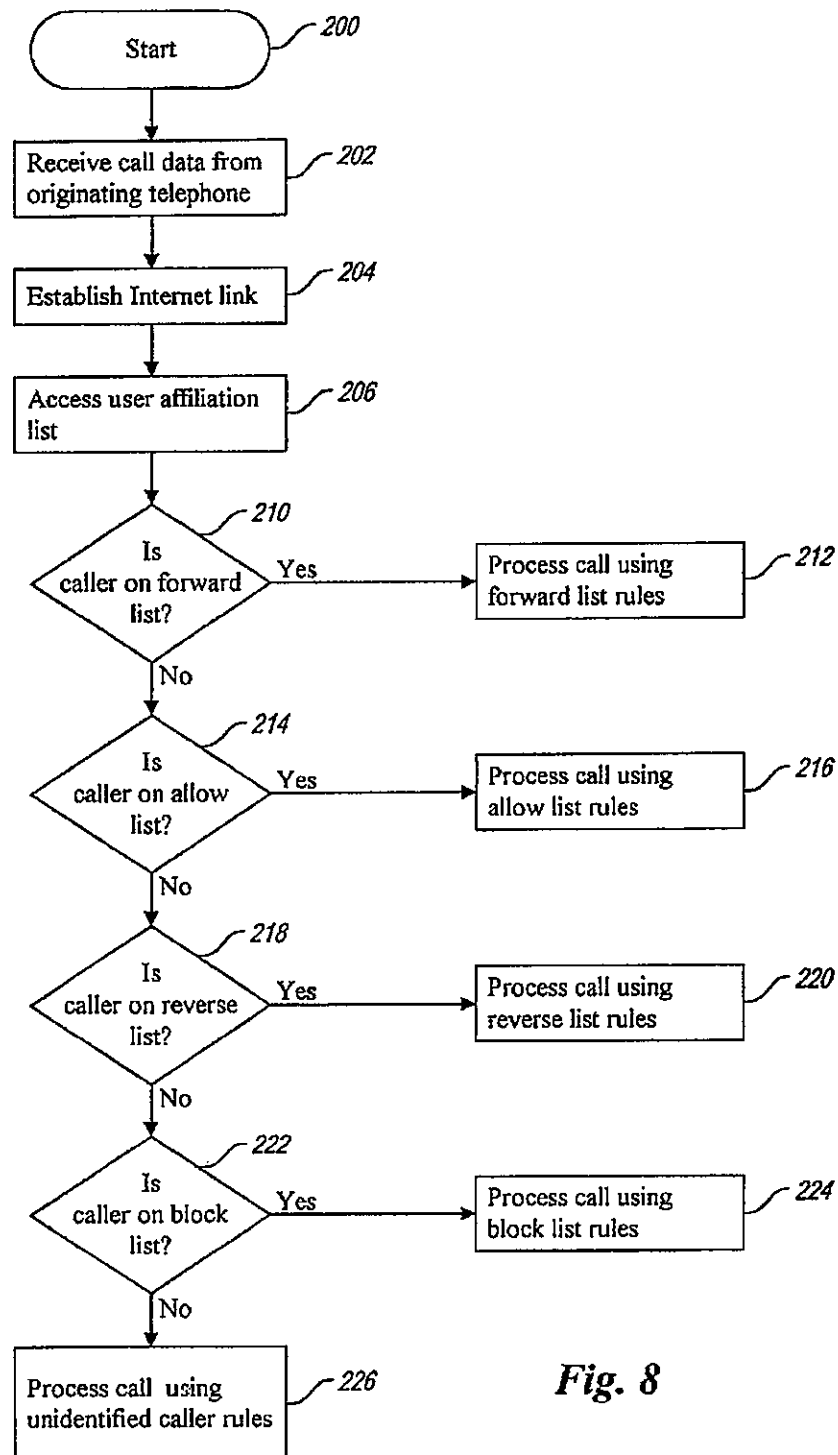
Fig. 7

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*Fig. 8*

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SYSTEM AND METHOD FOR USER AFFILIATION IN A TELEPHONE NETWORK

TECHNICAL FIELD

The present invention is directed generally to telecommunications and, more particularly, to a system and method for user selection of individual affiliations in a telephone network.

BACKGROUND OF THE INVENTION

Advances in telecommunication technology provide a user with a broad variety of communication options. For example, advances in telephone communication, including wireless telephone and cellular telephone, allow almost instantaneous communication between virtually any two locations on earth. Telephone service providers typically offer wide range of options, such as voice mail, caller identification, call waiting, call forwarding, three-way calling, and the like. The telephone service subscriber can customize their own telecommunications service with the selection of one or more options.

Despite these advances, the user is still limited in determining with whom the user wishes to speak and when the user wishes to speak with certain parties or, at the user's option, not speak with certain parties. Although caller identification (ID) can identify the calling party, caller ID does not always correctly identify the caller. For example, if the number identification data is not transmitted along with the call, the caller ID device indicates that caller data is "unavailable." In addition, the user must still respond to the ringing telephone and view the caller identification box to determine whether or not to answer the telephone. Thus, existing telephone technologies do not always provide user with the desired degree of control over incoming calls.

Therefore, it can be appreciated that there is a significant need for system and method to control incoming calls to a user's telephone. The present invention provides this and other advantages as will be apparent from the following detailed description and accompanying figures.

SUMMARY OF THE INVENTION

A system to specify user-selectable criteria for call processing is implemented on a conventional telephone system, such as a public switched telephone network (PSTN). The user-specified call processing criteria is stored on a network that is accessible by the user for data entry and/or editing, and is also accessible by the PSTN to determine whether call processing criteria exists for the particular caller. The Internet provides a readily available data structure for storage of the user-selectable call processing criteria. The user can establish a database stored on the Internet in association with the user's telephone number and indicating the user-selectable call processing criteria for one or more potential callers.

The caller may be identified by caller identification data, such as automatic number identification (ANI). Based on the destination telephone number and the caller identification data, the PSTN accesses the Internet and examines an affiliation list corresponding to the destination telephone number. If the caller identification data is present in the affiliation list, the call may be processed in accordance with the user-specified criteria for that particular caller.

The user (i.e., the called party) can specify user-selectable call processing criteria for all incoming calls, incoming calls from selected callers, and may further apply conditional

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criteria based on user preferences. For example, the user may select all calls during certain times of the day, calls from selected parties during other specified times of the day, and no calls during other times of the day. The user-selectable call processing criteria may be readily edited by the user and may be applied to multiple phone numbers associated with a particular caller.

The system may be readily implemented on current telephone systems with no significant modifications. For example, the system may apply the user-specified call processing criteria at the central office switch to which the destination telephone is coupled. All call processing prior to arrival at that central office switch is performed in accordance with conventional telecommunication techniques and standards. When a call arrives at the central office switch coupled to the destination telephone, the central office switch does not immediately establish a communication link with the destination telephone, but accesses the user-specified call processing criteria on the Internet and applies the call processing criteria. If the call is allowed, the central office switch establishes a communication link with the destination telephone in a conventional fashion to complete the telephone call. If the call is not allowed, the central office switch will not process the call, and may generate a busy signal to indicate that the user is unavailable.

The system may also be implemented at other points in the telecommunication network, such as a central office switch at the originating telephone. In addition, the user-specified call processing criteria may be stored on other forms of networks that are accessible to both the user (i.e., the called party) and the telecommunication system.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a computer system that includes components to implement the system of the present invention.

FIG. 2 is a functional block diagram outlining the operation of the present invention.

FIG. 3 is a functional block diagram of an alternate telecommunications configuration implementing the present invention.

FIG. 4 is a functional block diagram of another alternative telecommunications configuration implementing the present invention.

FIG. 5 is a functional block diagram providing details of the affiliation list of the system of FIG. 2.

FIG. 6 illustrates sample data provided in the list of FIG. 5.

FIG. 7 illustrates additional sample data provided in the list of FIG. 3.

FIG. 8 is a flowchart illustrating the operation of the system of FIG. 2.

DETAILED DESCRIPTION OF THE INVENTION

Existing telephone technology does not provide the telephone subscriber with a technique for controlling access to the user's telephone. Features such as caller ID identify the caller, but do not control access to the user's telephone. Thus, the conventional telephone system forwards the user to extreme options. The user may answer all incoming calls or may choose not to answer any incoming calls. However, the present invention provides selective options in between these two extremes. The present invention combines telephone technology with Internet technology to allow the user to "filter" incoming calls based on user-selected criteria. In

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particular, the user may establish a series of lists, stored on the Internet in association with the user's telephone, to filter incoming calls and thereby control access to the user's telephone.

FIG. 1 and the following discussion are intended to provide a brief, general description of a suitable computing environment in which the invention may be implemented. Although not required, the invention will be described in the general context of computer-executable instructions, such as program modules, being executed by a personal computer. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the invention may be practiced with other computer system configurations, including hand-held devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, and the like. The invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

With reference to FIG. 1, an exemplary system for implementing the invention includes a general purpose computing device in the form of a conventional personal computer 20, including a processing unit 21, a system memory 22, and a system bus 23 that couples various system components including the system memory to the processing unit 21. The system bus 23 may be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures. The system memory 22 includes read only memory (ROM) 24 and random access memory (RAM) 25. A basic input/output system 26 (BIOS), containing the basic routines that helps to transfer information between elements within the personal computer 20, such as during start-up, may be stored in ROM 24.

The personal computer 20 further includes input/output devices 27, such as a hard disk drive 28 for reading from and writing to a hard disk, not shown, a magnetic disk drive 29 for reading from or writing to a removable magnetic disk 30, and an optical disk drive 31 for reading from or writing to a removable optical disk 32 such as a CD ROM or other optical media. The hard disk drive 28, magnetic disk drive 29, and optical disk drive 31 are connected to the system bus 23 by a hard disk drive interface 33, a magnetic disk drive interface 34, and an optical drive interface 35, respectively. The drives and their associated computer-readable media provide nonvolatile storage of computer readable instructions, data structures, program modules and other data for the personal computer 20. Although the exemplary environment described herein employs a hard disk, a removable magnetic disk 30 and a removable optical disk 32, it should be appreciated by those skilled in the art that other types of computer readable media which can store data that is accessible by a computer, such as magnetic cassettes, flash memory cards, digital video disks, Bernoulli cartridges, random access memories (RAMs), read only memories (ROM), and the like, may also be used in the exemplary operating environment. Other I/O devices 27, such as a display 36, keyboard 37, mouse 38, and the like may be included in the personal computer 20 and function in a known manner. For the sake of brevity, other components, such as a joystick, sound board and speakers are not illustrated in FIG. 1.

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The personal computer 20 may also include a network interface 36 to permit operation in a networked environment using logical connections to one or more remote computers, such as a remote computer 40. The remote computer 40 may be another personal computer, a server, a router, a network PC, a peer device or other common network node, and typically includes many or all of the elements described above relative to the personal computer 20, although only a memory storage device 42 has been illustrated in FIG. 1. The logical connections depicted in FIG. 1 include a local area network (LAN) 43 and a wide area network (WAN) 44. Such networking environments are commonplace in offices, enterprise-wide computer networks, intranets and the Internet.

When used in a LAN networking environment, the personal computer 20 is connected to the LAN 43 through the network interface 39. When used in a WAN networking environment, the personal computer 20 typically includes a modem 45 or other means for establishing communications over the wide area network 44, such as the Internet. The modem 45, which may be internal or external, permits communication with remote computers 46-50. In a networked environment, program modules depicted relative to the personal computer 20, or portions thereof, may be stored in the remote memory storage device 42 via the LAN 51 or stored in a remote memory storage device 52 via the WAN 44. It will be appreciated that the network connections shown are exemplary and other means of establishing a communications link between the computers may be used.

The present invention is embodied in a system 100 illustrated in the functional diagram of FIG. 2. In a typical telephone communication, an originating telephone 102 is operated by a calling party to place a call to a destination telephone 104. The originating telephone generates signals that are detected by a central office switch 106 operated by a local exchange carrier (LEC) 108. The LEC 108 is the telephone service provider for the calling party. The originating telephone 102 is coupled to the central office switch 106 via a communication link 110. As those skilled in the art can appreciate, the communication link 110 may be a hard-wired connection, such as a fiber optic, copper wire, or the like. Alternatively, the communication link 110 may be a wireless communication link if the originating phone 102 is a cellular telephone or some other form of wireless telephone.

Similarly, the destination telephone 104 is coupled to a central office switch 116 operated by a local exchange carrier (LEC) 118. The destination telephone 104 is coupled to the central office switch 116 via a communication link 120. The communication link 120 may be a hard-wired communication link or a wireless communication link, as described above with respect to the communication link 110. The present invention is not limited by the specific form of communication link or central office switch.

The LEC 108 establishes a communication link with the LEC 118. As illustrated in FIG. 2, the communication link between the LEC 108 and the LEC 118 is through a long distance carrier (LDC) 124. The LEC 108 establishes a communication link 126 with the LDC 124 which, in turn, establishes a communication link 128 with the LEC 118. If the telephone call from the originating telephone 102 to the destination telephone 104 is not a long distance call, the LDC 124 is not required. In this case, the communication link 126 may couple the LEC 108 directly to the LEC 118. The use of the system 100 with other telephone configurations are illustrated in other figures.

To place a telephone call, the calling party activates the originating telephone 102 to dial in the telephone number

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corresponding to the destination telephone number 104, thereby establishing the communication link 110 with the central office switch 106. In true, the central office switch 106 establishes the communication link 126 (via the LDC 124, if necessary), thus establishing a communication link with the central office switch 116. In a conventional telephone system, the central office switch 116 establishes the communication link 120 to the destination telephone 104 causing the destination telephone to ring. If the subscriber picks up the destination telephone, a complete communication link between the originating telephone 102 and the destination telephone 104 has been established. This is sometimes referred to as "terminating" the telephone call. The specific telecommunications protocol used to establish a telephone communication link between the originating telephone 102 and the destination telephone 104 is well known in the art and need not be described herein. The preceding description of techniques used to establish the telephone communication link are provided only as a basis for describing the additional activities performed by the system 100.

With the system 100, the central office switch 116 does not initially establish the telephone communication link 120 with the destination telephone 104 to cause the telephone to ring. Instead, the central office switch 116 establishes a communication link 132 with a computer network 134, such as the Internet. As those skilled in the art can appreciate, the Internet is a vast multi-computer network coupled together by data links having various communication speeds. Although the Internet 134 may use a variety of different communication protocols, a well-known communication protocol used by the Internet is a Transmission Control Protocol/Internet Protocol (TCP/IP). The transmission of data on the Internet 134 using the TCP/IP is known to those skilled in the art and need not be described in greater detail herein.

The central office switch 116 utilizes conventional telephone communication protocols, which may be different from the TCP/IP communication protocols used by the Internet 134. The system 100 includes a communication interface 136 to translate data between the two communication protocols. The communication interface 136 includes a telephone interface portion 138 and an Internet interface portion 140. The telephone interface portion 138 is coupled to the central office switch 116 via the communication link 132 such that communications occurring on the communication link 132 utilize the telephone communication protocol. The Internet interface portion 140 communicates via the Internet using conventional communication protocols, such as TCP/IP.

The communication interface 136 may be implemented on a computing platform that functions as a server. The conventional components of the computing platform, such as a CPU, memory, and the like are known to those skilled in the art and need not be described in greater detail herein. The telephone interface portion 138 may comprise an Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) to communicate with the central office switch 116. The ISDN PRI, which may be implemented on a plug-in computer card, provides information to the telephone interface portion 138, such as automatic number identification (ANI), dialed number identification service (DNIS), and the like. As is known, ANI provides the telephone number of the caller's telephone (e.g., the originating telephone 102) while the DNIS allows the number the caller dialed (e.g., the destination telephone 104) to be forwarded to a computer system. These data may be con-

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sidered "keys" which may be used by the system 100 to identify the caller and the callee. Thus, the central office switch 116 provides information which may be used to access the affiliation list 150 for the destination telephone 104.

The Internet interface portion 140 may be conveniently implemented with a computer network card mounted in the same computing platform that includes the ISDN PRI card. However, it is not necessary for satisfactory operation of the system 100 that the interface cards be co-located in the same computing platform. It is only required that the telephone interface portion 138 communicate with the Internet interface portion 140. The Internet interface portion 140 receives the incoming data (e.g., the ANI, DNIS, and the like) and generates Internet compatible commands. The specific form of the Internet commands using, by way of example, TCP/IP, are within the scope of knowledge of one skilled in the art and need not be described herein. As will be described below, data provided by the central office switch 116 will be used to access data on the Internet and use that data to determine the manner in which a telephone call will be processed.

The Internet 134 stores an affiliation list 150, which may be established by the user of the destination telephone 104. Data stored within the affiliation list 150 is accessed by the central office switch 116 to determine the manner in which the call from the originating telephone 102 will be processed. Details of the affiliation list 150 are provided below. The Internet 134 also includes an Internet controller 152 which communicates with a user computer 154 via a network link 156. The communication between the user computer 154 and the Internet 134 is a conventional communication link used by millions of computers throughout the world. For example, the user computer 154 may be a personal computer (PC) containing a communication interface, such as a modem (not shown). The network link 156 may be a simple telephone communication link using the modem to communicate with the Internet 134. The Internet controller 152 functions in a conventional manner to communicate with the user computer 154 via the network link 156. Although the communication link 132 and the network link 156 are both communication links to the Internet, the network link 156 is a conventional computer connection established over a telephone line, a network connection, such as an Ethernet link, or the like. This conventional network link 156 is significantly different from the communication link 132 between the central office switch 116 and the Internet 134. The central office switch 116 establishes the communication link 132 to access data on the Internet and uses that accessed data to determine how to process an incoming call for the destination telephone 104. The network link 156 is a computer-to-computer connection that may simply use a telephone as the physical layer to establish the network link.

In the system 100, the central office switch 116 receives an incoming call from the originating telephone 102 via the central office switch 106 and, optionally, the LDC 124. Rather than immediately establishing the communication link 120 and generating a ring signal at the destination telephone 104, the central office switch 116 establishes the communication link 132 and communicates with the Internet 134 via the communication interface 136. The purpose of such communication is to access the affiliation list 150 and thereby determine the manner in which the user of the destination telephone 104 wishes calls to be processed.

FIG. 3 illustrates the system 100 for a telephone system configuration in which the originating telephone 102 and the

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destination telephone 104 are both serviced by the same local exchange carrier 108. The originating telephone 102 establishes the communication link 110 with the central office switch 106 in the manner described above. The central office switch 106 establishes the communication link 126 directly with the central office switch 116 without the need for the LDC 124 (see FIG. 2). The central office switch 116 operates in the manner described above. That is, the central office switch 116 does not immediately establish the communication link 120, but does establish the communication link 132 with the Internet 134. For the sake of simplicity, FIG. 3 does not illustrate the communication interface 136. However, those skilled in the art will appreciate that the central office switch 116 accesses the affiliation list 150 via the communication interface 136 (see FIG. 2).

For the sake of simplicity, FIG. 3 also does not show the Internet controller 152 and the user computer 154. However, those skilled in the art can appreciate that those portions of the system may also be present in the embodiment illustrated in FIG. 3. However, it should be noted that the user computer 154 and the Internet controller 152 need only be used to edit the affiliation list 150. The call processing by the central office switch 116 does not depend on the presence of the Internet controller 152 or the user computer 154. That is, the central office switch 116 accesses the affiliation list 150 via the communication interface 136 regardless of the presence of the user computer 154.

In yet another telephone system configuration, illustrated in FIG. 4, the originating telephone 102 and the destination telephone 104 are not only serviced by the same local exchange carrier 108, but are connected to the same central office switch 116. However, the fundamental operation of the system 100 remains identical to that described above with respect to accessing the affiliation list 150. That is, the originating telephone 102 establishes the communication link 110 with the central office switch 116. However, the central office switch 106 need not establish the communication link 126 with any other central office switch since the destination telephone 104 is also connected to that same central office switch.

In this telephone system configuration, the central office switch 116 accesses the affiliation list 150 on the Internet 134 via the communication link 132 (see FIG. 2) in the manner described above. For the sake of simplicity, FIG. 4 does not illustrate the communication interface 136. However, those skilled in the art will recognize that the communication interface 136 operates to convert communication signals between telephone protocol used by the central office switch 106 and the Internet communication protocol used by the Internet 134. In addition, FIG. 4 also does not illustrate the Internet controller 152 and the user computer 154. As noted above with respect to FIG. 3, the Internet controller 152 and user computer 154 are not necessary for proper operation of the system 100. The user computer 154 is typically used in the system 100 to edit the affiliation list 150.

The affiliation list 150 is illustrated in greater detail in the functional block diagram of FIG. 5. The affiliation list comprises a series of sublists, illustrated in FIG. 3 as a forward list 160, a reverse list 162, a block list 164, and an allow list 166. The forward list 160 contains a list of Internet subscribers whose Internet activity a user wishes to monitor. This list is sometimes referred to as a "buddy" list. When the user operates the user computer 154 on the Internet 134, the Internet controller 152 accesses the forward list 160 via an affiliation list input/output (I/O) interface 170 to determine which Internet subscribers contained within the forward list

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are currently active on the Internet 134. In conventional Internet operation, the Internet controller 152 sends a message to the user computer 154 indicating which Internet subscribers on the forward list 160 are currently active on the Internet 134.

The forward list 160 is a list of Internet subscribers whose activity is reported to the user. Other Internet subscribers may have their own forward list (not shown) and may monitor the Internet activity of the user. When the user accesses the Internet 134 with the user computer 154, that activity can be monitored by others. With the system 100, it is possible to determine who is monitoring the user's Internet activity. The reverse list 162 contains a list of Internet subscribers who have placed the user in their forward list. That is, the reverse list 162 contains a list of Internet subscribers who have placed the user in their buddy list. With the reverse list 162, the user can determine who is monitoring his Internet activity.

The block list 164 contains a list of Internet subscribers that the user does not want to monitor his Internet activity. That is, the user's Internet activity will not be provided to any Internet subscriber contained in the block list 164. Thus, even if a particular Internet subscriber has placed the user on their forward list, the presence of that particular Internet subscriber's name on the block list 164 will prevent the user's Internet activity from being reported to the particular Internet subscriber. The use of the block list 164 provides certain security assurances to the user that their Internet activity is not being monitored by any undesirable Internet subscribers.

The allow list 166 contains a list of Internet subscribers for whom the user may wish to communicate with but whose Internet activity the user does not wish to monitor.

The system 100 combines the capabilities of the affiliation list 150 with telephone switching technology to filter incoming calls to the destination telephone 104. For example, the user may specify that only calls from Internet subscribers contained in the forward list 154 may contact the user via the destination telephone 104. Alternatively, the user may specify that a calling party whose name is contained in the forward list 160 or the allow list 166 may place a call to the destination telephone 104. As will be discussed in greater detail below, the system 100 allows the user to create general conditional processing, such as blocking calls or allowing calls. However, the user can also create specific conditional processing for individual callers or based on the user's current status or preferences.

The central office switch 116 accesses the affiliation list 150 via the communication link 132 and determines whether the calling party is in a list (e.g., the forward list 160) that the user wishes to communicate with. If the calling party is contained within an "approved" list, the central office switch 116 establishes the communication link 120 and sends a ring signal to the destination telephone 104. Thus, the user can pick up the telephone with the knowledge that the calling party is an individual with whom the user wishes to communicate.

Conversely, if the calling party is not contained within an approved list, such as the forward list 160 or the allow list 166, the central office switch 116 will not establish the communication link 120 with the destination telephone 104. Thus, the user will not be bothered by undesirable phone calls. In one embodiment, the central switch office simply will not establish the communication link 120 and the calling party will recognize that the call did not go through. Alternatively, the central office switch 116 may generate a

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signal indicating that the destination telephone 104 is busy. In this alternative embodiment, the calling party will receive a busy signal on the originating telephone 102. Thus, the user has the ability to filter incoming calls by creating a list of those individuals with whom the user wishes to communicate.

It should be noted that the affiliation list 150 may be dynamically altered by the user to add or delete individuals, change individuals from one list to another, or to change the call processing options for a particular list depending on the user's preferences. For example, the user may want to accept all calls from any source at certain times of the day. Under these circumstances, the user can edit the allow list 166 to accept calls from any calling party. Alternatively, the user may still maintain the block list 164 such that calls will not be processed from certain specified parties even if the user is willing to accept calls from any other source. Under other circumstances, the user may not wish to communicate with any individuals. In this instance, the user may indicate that all calling parties are on the block list 164. Thus, the central office switch 116 will access the Internet 134 in real-time and review data in the affiliation list 150 to thereby process incoming calls for the user in accordance with the rules present in the affiliation list.

The discussion above provides examples of the central office switch 116 processing calls from a calling party in accordance with their presence or absence of certain lists in the affiliation list 150. For example, a call from a party on the forward list 160 will be connected to the destination telephone 104 (see FIG. 2) while a call from a party on the block list 164 will not be put through to the destination telephone. However, the system 100 also allows the selection of call processing options on an individual basis rather than simply on the presence or absence in a particular list. For example, the user can edit the allow list 166 to specify that certain individuals are "allowed" while other individuals may be allowed, conditionally allowed, or blocked all together. If the individual calling party has an associated status indicating that they are allowed, the central office switch 116 will process the incoming call and connect it to the destination telephone 104. If the individual calling party has an associated blocked status, the central office switch 116 will not process the call and will not connect it to the destination telephone 104.

Furthermore, the user may attach conditional status to individual callers or to calling lists. Conditional status may be based on factors, such as the time of day, current availability of the user, work status, or the like. For example, the user may accept calls from certain work parties during specified periods of the day (e.g., 9:00 a.m.-11:00 a.m.), block calls from selected calling parties during other periods of time (e.g., 12:00-1:00 p.m.), or allow calls during a business meeting only from certain calling parties (e.g., the boss). These conditional status criteria may be applied to individuals or to one or more lists in the affiliation list 150.

FIG. 6 illustrates sample data entries in the allow list 166. The allow list 166 may include data, such as a name, Internet subscriber name, and one or more phone numbers associated with the individual data entry. It should be noted that the calling party need not have an Internet subscriber name for proper operation of the system 100. That is, the central office switch 116 accesses the allow list 166 utilizing the calling party number and need not rely on any email addresses or other Internet subscriber identification for proper operation. The allow list 166 may also include an email alias in addition to or in place of the Internet subscriber name. Some Internet subscribers prefer to "chat" with other subscribers

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utilizing an alias rather than their actual Internet subscriber name. The data of FIG. 6 illustrates one possible embodiment for the allow list 166. However, those skilled in the art can appreciate that the allow list 166 may typically be a part of a large database (not shown). Database operation is well known in the art, and need not be described in greater detail herein. The database or other form of the forward list 160 may be satisfactorily implemented using any known data structure for storage of data. For example, the various lists (e.g., the allow list 166, the reverse list 162, the block list 164 and the allow list 166) may all be integrated within a single database structure. The present invention is not limited by the specific structure of the affiliation list 150 nor by the form or format of data contained therein.

Rather than incoming call filtering on the basis of presence in a particular list, such as the allow list 166, as illustrated in FIG. 6, the affiliation list 150 may contain status data on an individual basis. In this event, the central office switch 116 (see FIG. 2) processes the incoming call in accordance with the designated status for that individual. In the example illustrated in FIG. 7, the affiliation list 150 contains one individual with an "allowed" status, one individual with a "blocked" status, and one individual with a "conditional" status based on user-selected criteria. In the example of FIG. 7, the user-selected criteria may be based on the particular phone from which the call is originating as well as the time of day in which the call is originated. For example, the user may wish to allow all calls from a particular number, such as an caller's work number. However, calls from another number, such as the caller's home phone, may be blocked. Other calls, such as from a caller's cellular telephone, may be allowed only at certain times of day. FIG. 7 is intended to illustrate some of the call processing options that are available to the user. As can be appreciated, a variety of different conditional status criteria may be applied to one or more potential calling parties. However, a common feature of the system 100 is that the telecommunication system (e.g., the central office switch 116) determines calling party status on the basis of information stored on the Internet and processes the incoming call in accordance with the user-specified criteria. Moreover, the system 100 operates in real-time to process the incoming call in accordance with the user-specified criteria.

The Internet 134 may be conveniently used as a storage area for the caller specified criteria. The advantage of such data storage on the Internet is that the data is widely accessible to the user. This provides a convenient mechanism for entering new caller data or editing existing caller data. The user can access the affiliation list 150 with the user computer 154 via the network link 156. In contrast, the central office switch 116 may access the affiliation list 150 via the communication link 132, which may typically be a high-speed communication link. In addition, FIGS. 2, 4, and 5 illustrate the central office switch 116 as the telecommunication component that accesses the Internet 134. It is convenient for operational efficiency to have the central office switch (e.g., the central office switch 116) to which the destination telephone 104 is connected perform such Internet access. It is at this stage of the telephone call processing that the telecommunication system may most conveniently determine the user-specified caller status. However, those skilled in the art will recognize that the status check may be performed by other portions of the telecommunication system, such as the central office switch 106, the LDC 124, or the like. Thus, the present invention is not limited by the particular telecommunication component that establishes the communication link with a network which the user-specified caller status data is stored.

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In addition, the system 100 can be readily implemented as an "add-on" component of the telecommunication system and need not be integrated with the central office switch 116. For example, the conventional central office switch provides the ability to divert calls based on certain call conditions, such as "Call Forward No Answer," which may be used to divert an incoming call to voicemail or "Call Forward Busy," which may also divert the incoming call to voicemail. To implement the system 100 with an add-on processor, the system may optionally include a Switch to Computer Applications Interface (SCAI) 174 and a call filtering processor 176. The dashed lines of FIG. 4 are intended to illustrate an alternative configuration of the system 100. This alternative configuration can also be implemented with other telephone system configurations, such as illustrated in FIGS. 2 and 3. The SCAI 174 is a telecommunication protocol that allows switches to communicate with external computers. Data, such as caller and callee telephone numbers, and status information, such as Call Forward Busy, are provided to the SCAI 174 by the central office switch 116.

The call filtering processor 176 performs the functions described above to process the call in accordance with the user-specified criteria. That is, the call filtering processor 176 receives caller and callee data from the SCAI 174 and accesses the affiliation list 150 via the communication interface 136 (see FIG. 2). The call filtering processor 176 uses user-specified call processing criteria to generate instructions for the central office switch 116. The instructions are provided to the central office switch 116 via the SCAI 174. Those skilled in the art will appreciate that the SCAI 174 is but one example of the Open Application Interface (OAI) that can be used with the central office switch 116.

As noted above, the system 100 can process a call intended for the destination telephone 104, block a call, or generate a busy signal at the originating telephone 102. However, the system 100 also operates with voicemail and permits a number of different customized outgoing messages. FIG. 4 illustrates a voicemail system 180 having a storage area containing one or more outgoing messages 182. For example, the voicemail system 180 can play an outgoing message 182 informing the caller that "the party you are calling only accepts calls from designated callers. Please leave a message." If calls are blocked only at certain times, the outgoing message 182 can say "the party you are calling does not accept calls between 11:30 a.m. and 1:00 p.m. Please leave a message or call back after 1:00 p.m." The outgoing message can also reflect callee availability by playing a message such as "The party you are calling is in a meeting. Please leave a message or call back in X minutes" where X reflects the amount of time before the meeting is expected to end. That information can be manually provided to the affiliation list 150 by the user or automatically derived from a computerized scheduling program on, by way of example, the user computer 154 (see FIG. 2).

Computerized scheduling programs, such as Microsoft® Schedule Plus, can be used on the user computer 154 (see FIG. 2). It is known that such scheduling programs can be accessed via a computer network or downloaded to a handheld computing device to track appointments. The system 100 can access such computerized scheduling programs and download appointments and scheduled meetings into the affiliation list 150. The outgoing messages 182 can be automatically selected on the basis of the user's computerized schedule. Thus, the system 100 permits the user to schedule his day (e.g., meetings, lunch time, in office/

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available for calls, in office/unavailable for calls, etc.) on a computerized scheduling program and to process calls in accordance with the computerized schedule and even select outgoing messages automatically based on the user's schedule.

The operation of the system 100 is illustrated in the flowchart of FIG. 7. At a start 200, the calling party has placed a call from the originating telephone 102 (see FIG. 2) to the destination telephone 104. In step 202, the central office switch 116 has received call data from the originating telephone 102. The received call data includes the destination telephone number of the destination telephone 104 and identification data indicating the originating telephone 102 as the source of the present call. Use of automatic number identification (ANI) is a well-known technique for providing identification data indicating the originating telephone 102 as the source of the present call. While the specific implementation of ANI data, sometimes referred to as caller ID, may not be uniformly implemented throughout the United States, the ANI data is typically delivered between the first and second rings. In the present invention, the central office switch 116 (see FIG. 2) does not initiate a ring signal to the destination telephone 104 until after determining the status of the calling party based on the ANI. In future implementations, telecommunication companies may transmit other forms of caller identification, such as caller name, Internet address, email alias, or the like. The system 100 operates satisfactorily with any form of caller identification. The only requirement for the system 100 is that some form of caller identification be provided. The call is processed in accordance with the user-specified criteria in the affiliation list 150 for the identified caller.

In step 204, the central office switch 116 (see FIG. 2) establishes the communication link 132 with the Internet 134. Although step 204 illustrates the system 100 as actively establishing the communication link 132 with the Internet 134, those skilled in the art will recognize that the system 100 can utilize a continuous high-speed data link between the central office switch and the Internet. Thus, it is not necessary to establish a network link for each and every incoming call processed by the central office switch 116. As previously described, the communication interface 136 translates data between the telephone protocol and the Internet protocol. In step 206, the system 100 accesses the affiliation list 150 for the user (i.e., the called party). In an exemplary embodiment, the telephone number of the destination telephone 104 or other callee identification is used as an index or pointer to a specific location within the database where the affiliation list 150 for the particular user may be found. Database operation in general, and techniques for locating specific items within a database in particular are known to those skilled in the art and need not be described herein.

In decision 210, the system 100 determines whether the caller identification data is on the forward list 160 (see FIG. 3). If the caller identification data is present in the forward list, the result of the decision 210 is YES. In that event, the system 100 proceeds to FIG. 7B where the call is processed in accordance with the rules associated with the forward list 160.

If the caller identification data is not present in the forward list 160 (see FIG. 3), the result of decision 210 is NO. In that event, the system 100 moves to decision 212 to determine whether the caller identification data is in the allow list 166. If the caller identification data is present in the allow list 166, the result of decision 214 is YES. In that event, the system 100 proceeds to decision 216 where the

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call is processed in accordance with the rules associated with the allow list 166. If the caller identification data is not present in the allow list 166, the result of decision 216 is NO.

In decision 218, the system 100 determines whether the caller identification data is present in the reverse list 162. If the caller identification data is present in the reverse list 162, the system 100 proceeds to the step 220 where the call is processed in accordance with the rules associated with the reverse list 162. If the caller identification data is not present in the reverse list, the result of decision 218 is NO. In that event, the system moves to decision 216 to determine whether the caller is present on the block list 164. If the caller is present on the block list 164, the result of decision 222 is YES. In that event, the system proceeds to step 224 where the call is processed in accordance with the rules associated with the block list. If the caller identification data is not present in the block list 164, the result of decision 222 is NO. This indicates that the caller identification data is not present in any of the user-specified lists in the affiliation list 150. In that event, the system moves to step 226 where the call may be processed in accordance with user-specified rules of processing anonymous or unidentified calls. The flowchart of FIG. 8 illustrates the operation of the system 100 with multiple lists wherein the call processing rules are designated for each list. In this embodiment, the call is processed on the basis of the presence or absence of the caller identification data in a particular list. However, as previously discussed, the affiliation list 150 (see FIG. 6B) may include user-specified status criteria for individual callers. In this embodiment, the system 100 processes the call on the basis of the user-specified status criteria associated with the individual caller rather than on the basis of the caller's presence or absence in a specific list. In that event, the system 100 may simply access the user affiliation list (see step 206 in FIG. 7) and process the call in accordance with the user-specified status criteria for the individual caller. If the caller identification data is not present in the affiliation list 160, the call may be processed using user-specified call processing criteria for unidentified callers, as shown in step 226.

Thus, the system 100 allows the user to specify call processing rules for a plurality of different caller lists or for individual callers within a list. The caller lists may be readily edited in accordance with the changing desires of the user. The user may alter the call processing rules in accordance with various times of day, work conditions, or even the personal mood of the user. For example, the user may process all calls during certain times of the day, such as when the user is at work. However, when the user arrives home, subsequent calls may be processed in accordance with a different set of rules, such as accepting no calls during dinner time or after a certain time at night.

These rules may be applied differentially to different ones of the list in the affiliation list 150. For example, the user may accept calls from any calling party on the forward list 160 (see FIG. 3) or the allow list 166 during the evening hours. However, after a certain time at night, the caller may accept calls only from calling parties on the forward list 160. Thus, the system 100 allows great flexibility in the user selection of calling rules and lists. The system 100 allows the user to filter incoming calls in accordance with generalized rules or in accordance with highly specific rules.

From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. For example, the system discussed herein

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uses, by way of example, the Internet 134 to store the affiliation list 150. However, the system 100 can be implemented with other computer networks or as a portion of a telephone switch, such as the central office switch 116. The telephone service provider can provide a customer with an affiliation list and some means to control the list as a value-added telephone service. The central office switch 116 accesses the internal affiliation list and processes the incoming calls in accordance with the user-specified criteria contained therein. Accordingly, the invention is not limited except as by the appended claims.

What is claimed is:

1. In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a system for processing an incoming call from a subscriber to a user in the telephone network according to user specifications, the system comprising:

a data structure contained within a computer network to store user-selectable criteria for call processing, wherein the data structure stores the user-selectable criteria in one or more lists that are used in filtering an incoming call and wherein some of the one or more lists are used to filter the incoming call according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the one or more lists over the computer network access port; and

a controller to receive the incoming call designated for the user telephone and to process the incoming call in accordance with the user-selectable criteria, the controller accessing the user-selectable criteria in the one or more lists of the data structure via the computer network access port and thereby applying the user-selectable criteria to the incoming call.

2. The system of claim 1 wherein the data structure stores the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, the controller using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

3. The system of claim 2 wherein the identification data is telephone automatic number identification data.

4. The system of claim 2 wherein the identification data is electronic mail identification data.

5. The system of claim 1 wherein the user-selectable criteria indicates permission to process the incoming call, the controller processing the incoming call in accordance with the permission to generate a ring signal at the user telephone.

6. The system of claim 1 wherein the user-selectable criteria indicates no permission to process the incoming call, the controller blocking the incoming call and not generating a ring signal at the user telephone.

7. The system of claim 6 wherein the controller blocking the incoming call generates a busy signal at an origination telephone from which the incoming call is originated.

8. The system of claim 6, further comprising an outgoing message system having an outgoing message, the controller blocking the incoming call and playing the outgoing message at an origination telephone.

9. The system of claim 1 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, the controller processing

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the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone, the controller blocking the incoming call and not generating a ring signal at the user telephone during a time period other than the user-selected time period.

10. The system of claim 9, further comprising an outgoing message system storing a plurality of outgoing messages, the controller selecting one of the plurality of outgoing messages wherein the outgoing message system plays the selected outgoing message at an origination telephone from which the incoming call is originated.

11. The system of claim 10 wherein the incoming call arrives at a particular time other than the user-selected time period, the controller selecting the selected outgoing message based on the particular time of arrival of the incoming call.

12. The system of claim 1, further comprising a data editor to permit user entry and editing of the user-selectable criteria into the data structure.

13. The system of claim 12 wherein the data editor is a computer coupled to the computer network.

14. The system of claim 1 wherein the computer network is the Internet.

15. The system of claim 1 wherein each of the one or more lists of the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the controller using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

16. The system of claim 15, further comprising a data editor to permit user entry of the caller identification data into the data structure prior to receipt of the incoming call.

17. The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls, the controller processing the incoming call and signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

18. The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, the controller blocking processing of the incoming call if the origination identification data corresponds to caller identification data in the first of the plurality of data substructures.

19. The system of claim 18 wherein the controller blocking processing of the incoming call generates a busy signal at an origination telephone from which the incoming call is originated.

20. The system of claim 15 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incoming calls subject to user-selected time restrictions, the controller processing the incoming call in accordance with the time restrictions and signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

21. In an environment where subscribers call a user over a telephone network, wherein a user telephone is coupled

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with the telephone network, a system for user specification of call processing in the telephone network, the system comprising:

a data structure contained within a computer network and accessible by the telephone network, the data structure containing a plurality of caller lists each having associated user-selectable criteria for call processing, wherein some of the plurality of caller lists are conditioned according to current activity of subscribers on the computer network or according to current activity of the user on the computer network;

a computer network access port used by the telephone network to access the data structure such that the telephone network has access to the plurality of caller lists; and

a controller on the telephone network to receive an incoming call having origination data indicative of a subscriber and destination data indicating the call is designated for the user telephone, the controller accessing the plurality of caller lists in the data structure via the computer network access port to determine which of the plurality of caller lists contains the origination data, the controller processing the incoming call in accordance with the user-selectable criteria associated with the caller list containing the origination data.

22. The system of claim 21 wherein the user-selectable criteria associated with the caller list containing the origination data indicates permission to process the incoming call, the controller processing the incoming call in accordance with the permission to generate a ring signal at the user telephone.

23. The system of claim 21 wherein the user-selectable criteria associated with the caller list containing the origination data indicates no permission to process the incoming call, the controller blocking the incoming call and not generating a ring signal at the user telephone.

24. The system of claim 21 wherein the user-selectable criteria associated with the caller list containing the origination data indicates permission to process the incoming call during a user-selected time period, the controller processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone, the controller blocking the incoming call and not generating a ring signal at the user telephone during time periods other than the user-selected time period.

25. The system of claim 21, further comprising a data editor to permit user entry and editing of the user-selectable criteria into the data structure.

26. The system of claim 21 wherein the computer network is the Internet.

27. The system of claim 21 wherein the telephone network is a public switched telephone network.

28. In a system where subscribers call a user over a telephone network, wherein a user telephone is coupled with the telephone network, a computer program product for implementing a method for processing a call from a subscriber to a user over a telephone network, the computer program product comprising:

a computer readable medium having computer executable instructions for performing the method, the method comprising:

accepting an incoming call designated for the user telephone;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the

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user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call in accordance with the user-selectable criteria.

29. The computer program product of claim 28, further comprising:

generating call processing rules based on the user-selectable criteria; and

storing the call processing rules on the computer network in association with a caller list.

30. The computer program product of claim 29 wherein generating call processing rules is performed on a computer coupled to the computer network.

31. The computer program product of claim 28 wherein the data structures store the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, the method further comprising accessing the data structure using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

32. The computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call, the method comprising:

processing the incoming call comprising establishing a link with the user telephone; and

generating a ring signal at the user telephone.

33. The computer program product of claim 28 wherein the user-selectable criteria indicates no permission to process the incoming call, the method further comprising processing the incoming call comprising blocking the incoming call; and

not generating a ring signal at the user telephone.

34. The computer program product of claim 33, further comprising generating a busy signal at an origination telephone from which the incoming call is originated.

35. The computer program product of claim 34, further comprising playing an outgoing message at an origination telephone from which the incoming call is originated, the outgoing message indicating that the incoming call will not be connected to the user telephone.

36. The computer program product of claim 28 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, the method further comprising:

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone; and

blocking the incoming call and not generating a ring signal at the user telephone during time periods other than the user-selected time period.

37. The computer program product of claim 28 wherein the data structure comprises a plurality of data substructures each storing caller identification data and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, the method further comprising:

accessing the data structure using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data; and

processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

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38. In a system including a telephone network and a computer network where an originating telephone connects with a user telephone over the telephone network, a method for processing a call from the originating telephone to the user telephone according to user specifications, the method comprising:

accepting an incoming call designated for the user telephone from an originating telephone of a subscriber;

accessing a data structure contained within a computer network that is independent of the telephone network to retrieve user-selectable criteria for call processing stored within the data structure, wherein some of the user-selectable criteria is conditioned on current activity of subscribers on the computer network or according to current activity of the user on the computer network; and

processing the incoming call of the subscriber in accordance with the user-selectable criteria.

39. The method of claim 38, further comprising generating call processing rules based on the user-selectable criteria and storing the call processing rules on the computer network in association with a caller list that is associated with the data structure.

40. The method of claim 39 wherein generating call processing rules is performed on a computer coupled to the computer network.

41. The method of claim 38 wherein the computer network is the Internet.

42. The method of claim 38 wherein the telephone network is a public switched telephone network.

43. The method of claim 38 wherein the data structure stores the user-selectable criteria in association with caller identification data and the incoming call includes origination identification data associated therewith, wherein accessing a data structure further comprises using the origination identification data to identify user-selectable criteria stored in the data structure in association with the caller identification data.

44. The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call, wherein processing the incoming call further comprises establishing a link with the user telephone and generating a ring signal at the user telephone.

45. The method of claim 38 wherein the user-selectable criteria indicates no permission to process the incoming call, wherein processing the incoming call further comprises blocking the incoming call and not generating a ring signal at the user telephone.

46. The method of claim 45, further comprising generating a busy signal at an origination telephone from which the incoming call is originated.

47. The method of claim 45, further comprising playing an outgoing message at an origination telephone from which the incoming call is originated, the outgoing message indicating that the incoming call will not be connected to the user telephone.

48. The method of claim 38 wherein the user-selectable criteria indicates permission to process the incoming call during a user-selected time period, wherein processing the incoming call further comprises:

processing the incoming call during the user-selected time period in accordance with the permission to generate a ring signal at the user telephone;

blocking the incoming call; and

not generating a ring signal at the user telephone during time periods other than the user-selected time period.

US 6,421,439 B1

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49. The method of claim 38 wherein the data structure comprises a plurality of data substructures each storing caller identification and having the user-selectable criteria associated with each of the plurality of data substructures, wherein the incoming call includes origination identification data associated therewith, wherein accessing the data structure further comprises using the origination identification data to determine a particular one of the plurality of data substructures storing caller identification data corresponding to the origination identification data and processing the incoming call in accordance with the user-selectable criteria associated with the particular one of the plurality of data substructures.

50. The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will accept incom-

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ing calls, wherein processing the incoming call further comprises signaling the user telephone of an incoming call directed to the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

51. The method of claim 49 wherein a first of the plurality of data substructures is a list of caller identification data to identify individuals from whom the user will not accept incoming calls, wherein processing the incoming call further comprises not establishing a communication link with the user telephone if the origination identification data corresponds to caller identification in the first of the plurality of data substructures.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,421,439 B1
DATED : July 16, 2002
INVENTOR(S) : Stephen Mitchell Liffick

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1.

Line 37, after "need for" please insert -- a --

Column 3.

Line 61, before "and the like" please delete "(ROM)," and insert -- (ROMs), --

Column 5.

Line 3, after "In" please delete "true" and insert -- turn --

Column 10.

Line 28, after "such as" please delete "an" and insert -- a --

Column 17.

Line 31, after "method further comprising" please insert -- : --

Signed and Sealed this

Sixth Day of April, 2004



JON W. DUDAS
Acting Director of the United States Patent and Trademark Office

Exhibit

5

**CONTAINS CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER**

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C. 20436**

**Before The Honorable Paul J. Luckern
Administrative Law Judge**

In the Matter of

**CERTAIN UNIFIED COMMUNICATION
SYSTEMS, PRODUCTS USED WITH SUCH
SYSTEMS, AND COMPONENTS THEREOF**

Inv. No. 337-TA-598

COMPLAINANT MICROSOFT'S POSTHEARING BRIEF

**CONTAINS CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER**

Similarly, the '289 patent repeatedly uses both terms interchangeably to convey the same idea. [JX-2 at 2:15-18 ("the potential callee's computer activity may be monitored and the status of the computer as idle or active may be reported to the computer network."); 14:37-39 ("By monitoring this activity, the operating system can determine the user's status and activate certain software programs,...").] [CPFF 550 (Chang, Tr. 477:4-478:19).]

For the reasons discussed above, the '289 patent specification supports Microsoft's proposed construction of the term "activity" to mean "status."

b. The Term "Activity" Should Be Given the Same Construction in Both Liffick Patents

In their Prehearing Briefs, both Microsoft and ALE agreed that the term "activity" should be given the same meaning for both the '439 and '289 patents. The parties' dispute centered on whether "activity" should be construed as "status" (as proposed by Microsoft) or "active or idle" (as proposed by ALE). Given the absence of ALE's "idle or active" language from the '439 patent, Microsoft pointed out that the patentee could not have intended for this phrase to define a claim term appearing in both patents and that ALE's argument that the patentee chose to be his own lexicographer misses the mark when the patentee never even uses the phrase "idle or active" in the '439 patent. See Microsoft's Prehearing Brief at 32. [CPFF 574.]

On the eve of trial, ALE conceded that "activity" means "status" for purposes of the '439 patent. [CPFF 542.] In doing so, ALE took the new position that the term "activity" should be given different meanings with respect to the '439 and '289 patents. The problem with ALE's position is that there is simply no reason why the same term "activity" (which appears in both the '439 and '289 patent) should be given different meanings. The '439 and '289 patents were filed within a few weeks of each other, share the same inventor, and have similar specifications. [CPFF 575-577.]

Moreover, the interchangeability of the terms "activity" and "status" is apparent in the portion of the specification common to both the '439 and '289 patents. For example, the '439 and '289 patents describe the various sub-lists of the affiliation list 150 in terms of subscriber

**CONTAINS CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER**

“activity,” with the forward list 160 being a “list of Internet subscribers whose activity is reported to the user,” the block list 164 containing “a list of Internet subscribers that the user does not want to monitor his Internet activity,” and the allow list 166 being “a list of Internet subscribers ... whose Internet activity the user does not wish to monitor.” [JX-1 at 8:6-34 (emphases added); see also JX-2 at 8:14-41 (same).]

But later, when discussing a specific use of these sub-lists in a preferred embodiment, the ‘439 and ‘289 patents substitute the word “status” for “activity” when describing how “the affiliation list 150 may contain status data on an individual basis.” [JX-1 at 10:17-18 (emphases added); see also JX-2 at 10:24-25 (same).] This substitution of “status” for the earlier use of “activity” in the affiliation sub-lists is also apparent when the specification explains that, “[i]n the example illustrated in FIG. 7, the affiliation list 150 contains one individual with an ‘allowed’ status, one individual with a ‘blocked’ status, and one individual with a ‘conditional’ status based on user-selected criteria.” [JX-1 at 10:21-23 (emphases added); see also JX-2 at 10:28-31 (same).]

In fact, “status” may be substituted for “activity,” and vice-versa, in the specification of the ‘439 and ‘289 patents without any loss or change in meaning. [E.g., JX-1 at 7:57-8:34; JX-2 at 7:65-8:42.] Take for example the sentence “[w]ith the system 100, it is possible to determine who is monitoring the user’s Internet activity.” [JX-1 at 8:12-14; JX-2 at 18:21.] When “status” substitutes for “activity,” the meaning of the sentence is indeed preserved: “[w]ith the system 100, it is possible to determine who is monitoring the user’s Internet status.” This interchangeability of both words is clear evidence that “status” is the correct construction for “activity” for both the ‘439 and ‘289 patents.

Given the same inventor, same timeframe, and similarity in patent specifications, the term “activity” should be given the same construction with respect to the ‘439 and ‘289 patent. [CPFF 575-577.] ALE has not provided any reason why a person of ordinary skill in the art would have given the same term different meanings. Accordingly, for the reasons discussed

**CONTAINS CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER**

above, the Court should adopt Microsoft's construction of "status," and reject ALE's overly narrow construction of "active or idle."

C. Claim Construction Analysis for the '064 and '357 O'Neal Patents

In order to streamline the issues for the hearing, the parties have agreed upon the following claim constructions for purposes of this Investigation:

Claim Term	Agreed Upon Construction
unified messaging system	system that allows messages of a data-centric network and a telephony-centric network to be received, stored, retrieved, and forwarded without regard to the communication devices or networks employed for the transmission of the messages
communication options	parameters associated with specific types of communication services
telephony-centric network	a network that carries telephony information used by devices such as telephones, pagers, facsimile machines, and voice mail boxes
data-centric network	a network, that carries digital data, primarily to facilitate information exchange among computers and computer peripherals
e-mail service	a communication service for receiving, storing, retrieving, and forwarding e-mails
voice telephone service	a communication service for receiving, storing, retrieving, and forwarding telephony information

[See Order No. 18 (attached letter dated October 5, 2007).]

The disputed claim terms in the O'Neal patents that need construction by the Court are:

- "said computer server being configured to generate a single graphical menu for displaying said communication options for each of said communication services at the same time" (claims 1 and 20 of the '064 patent and claim 1 of the '357 patent)
- "a telephony server coupled to exchange data with said communication profile database, said telephony server being configured to audibly represent said communication options to said telephone when said subscriber employs said telephone to access said computer-implemented control center" (claims 1 and 20 of the '064 patent and claim 1 of the '357 patent)

[CPFF 578-592.]

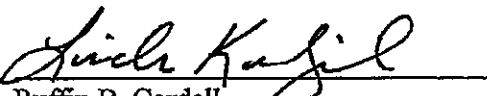
**CONTAINS CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER**

X. CONCLUSION

Accordingly, Microsoft respectfully requests the Administrative Law Judge to issue (1) an Initial Determination finding that ALE is in violation of Section 337, and (2) a Recommended Determination that the appropriate remedies are a limited exclusion order and a cease and desist order, and that the Presidential Review bond be set at 100%.

Respectfully submitted,

FISH & RICHARDSON P.C.

By: 

Dated: October 30, 2007

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COUNSEL FOR COMPLAINANT
MICROSOFT CORPORATION

Exhibit

6

FILED ELECTRONICALLY

PATENT APPLICATION
Docket No. 13768.67.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)
)
	Stephen Mitchell Lifflick)
)
Patent No.:	6,430,289)
)
Issue Date:	August 6, 2002)
)
For:	SYSTEM AND METHOD FOR COMPUTERIZED)
	STATUS MONITOR AND USE IN A TELEPHONE)
	NETWORK)
)
)
Customer No.:	47973)

TERMINAL DISCLAIMER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Owner, Microsoft Corporation, having a 100% interest in the U.S Patent No. 6,430,289 ("**subject patent**"), hereby disclaims, except as provided below, the terminal part of the statutory term of the **subject patent** which would extend beyond the expiration date of the full statutory term of U.S. Patent No. 6,421,439 ("**reference patent**") as the terms are defined in 35 U.S.C. §§ 154 and 173, and as the terms of the **reference patent** may be presently shortened by any terminal disclaimer. The owner hereby agrees that the **subject patent** shall be enforceable only for and during such period that the **subject patent** and the **reference patent** are commonly owned. This Agreement runs with the **subject patent** and is binding upon the grantee, its successors or assigns.

MSAL 05020213

In making the above disclaimer, the Owner does not disclaim the terminal part of the **subject patent** on the instant application that would extend beyond the expiration date of the full statutory term as defined in 35 U.S.C. §§ 154 and 173 of the **reference patent**, "as the term[s] of said **reference patent** may be shortened by any terminal disclaimer filed prior to the grant of the **reference patent**, in the event that the said **reference patent**, respectfully: expires for failure to pay a maintenance fee; is held unforceable; is found invalid by a court of competent jurisdiction; is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; has all claims canceled by a reexamination certificate; is reissued; or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer prior to its grant.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the **subject patent**.

DATED this 3rd day of August, 2007.

Respectfully submitted,



RICK D. NYDEGGER
Attorney for Applicants
Registration No. 28,651
Customer No. 47973

RDN:ppa
AAM000004873V001

Exhibit

7

**EXHIBIT REDACTED IN ITS
ENTIRETY**

Exhibit

8

Certain Unified Communications No. 337-TA-598 (O/C) October 10, 2007

Heritage Reporting Corporation

Page 367 to Page 759

CONDENSED TRANSCRIPT AND CONCORDANCE
PREPARED BY

HERITAGE REPORTING CORPORATION

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Suite 600

Washington, DC 20005

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BSA

Certain Unified Communications No. 337-TA-598 (O/C) October 10, 2007

XMAX(1/1)

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(1) BEFORE THE
 (2) UNITED STATES INTERNATIONAL TRADE COMMISSION
 (3)
 (4)
 (5) In the Matter of:) Investigation No.
 (6) CERTAIN UNIFIED COMMUNICATIONS) 337-TA-598
 (7) SYSTEMS, PRODUCTS USED WITH)
 (8) SUCH SYSTEMS, AND COMPONENTS)
 (9) THEREOF)
 (10))
 (11) Hearing Room A
 (12)
 (13) United States
 (14) International Trade Commission
 (15) 500 E Street, Southwest
 (16) Washington, D.C.
 (17)
 (18) Wednesday, October 10, 2007
 (19)
 (20) VOLUME II
 (21)
 (22) The parties met, pursuant to the notice of the
 (23) Judge, at 8:30 a.m.
 (24)
 (25) BEFORE THE HONORABLE PAUL J. LUCKERN

Page 369

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Page 368

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Page 370

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(Index appears at end of transcript)

BSA

Certain Unified Communications No. 337-TA-598 (O/C) October 10, 2007

XMAX(13/13)

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- (1) THE WITNESS: Sure. Probably the
 (2) easiest way is to refer to some of the diagrams
 (3) in JX-1 and JX-2.
 (4) JUDGE LUCKERN: Fine.
 (5) THE WITNESS: So if you would flip to
 (6) JX-1, if you could flip to figure 2 of JX-1 and
 (7) you compare that to a comparable figure in
 (8) JX-2, That would be figure 9 in JX-2.
 (9) JUDGE LUCKERN: Okay, I have them both
 (10) in front of me.
 (11) THE WITNESS: Thank you. So as you
 (12) can see, figure 2 is an embodiment of the '439
 (13) patent and specifically deals with the call
 (14) processing based on user criterion and also it
 (15) is based on activity of a user computer 154 on
 (16) the right-hand side; whereas in the case of
 (17) JX-2, as shown in figure 9, figure 9 is an
 (18) embodiment of the '289 patent.
 (19) And you will see additional elements
 (20) of caller computer on the left-hand side. So
 (21) in the case of JX-2 for the '289 patent, it
 (22) addresses specifically call routing based on
 (23) the caller's computer in combination with the
 (24) callee's computer in determining the best time
 (25) to process a call based on those conditions;

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- (1) whereas in the case of JX-1, I'm sorry, '439
 (2) patent, the emphasis of the patent was
 (3) primarily on the user computer, which is the
 (4) call party's computer on the right-hand side.
 (5) JUDGE LUCKERN: What, again, is how a
 (6) person of ordinary skill in the art would
 (7) differentiate between the user computer and the
 (8) calling computer? It is probably clear from
 (9) the words themselves, but I will ask you.
 (10) When you used this term user computer,
 (11) how would a person of ordinary skill understand
 (12) user computer?
 (13) THE WITNESS: Actually user computer
 (14) is a specific term used only in the context of
 (15) '439 and '289 patent. In the case of '439 and
 (16) '289 patent, user computer refers to the
 (17) computer used by the called party or what we
 (18) call callee in this invention. So user
 (19) computer is not a specific term in the industry
 (20) but it just refers to the specific computer
 (21) system used by the called party.
 (22) JUDGE LUCKERN: Now, were you here
 (23) yesterday for the testimony that we had
 (24) yesterday?
 (25) THE WITNESS: Yes, I was.

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- (1) JUDGE LUCKERN: The witness was doing
 (2) something up here on the stand and it is clear
 (3) from the transcript, and I don't want the say
 (4) what's in the transcript unless I have it
 (5) before me, and I don't have it before me, but
 (6) we had some lady out in the audience doing
 (7) something.
 (8) Were the people user computers or
 (9) caller computers or anything? Do you
 (10) understand what I am trying to ask you as far
 (11) as what happened yesterday in the courtroom?
 (12) THE WITNESS: Sure. Your question was
 (13) would that computer be -
 (14) JUDGE LUCKERN: Well, was the witness
 (15) a user computer or something or a callee
 (16) computer?
 (17) THE WITNESS: Actually, the user
 (18) computer, again, used in this particular, in
 (19) the '439 patent or '289 patent specifically
 (20) refers to an ordinary computer used by just a
 (21) regular user. It is not any specific type of
 (22) computer. It is just a regular computer used
 (23) in the trade.
 (24) JUDGE LUCKERN: Let me ask you this
 (25) question: You pointed to some distinctions

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- (1) with respect to JX-1 and JX-2. Are those
 (2) distinctions fairly important with respect to
 (3) how I understand the claims that are at issue
 (4) in these two patents or is it your opinion with
 (5) respect to the claims at issue in these
 (6) patents, I don't have to be bothered with this
 (7) distinction? Do you understand what I am
 (8) trying to ask you?
 (9) THE WITNESS: I don't think you have
 (10) to worry too much about the distinction as far
 (11) as the claims, the claims themselves.
 (12) JUDGE LUCKERN: As far as the claims
 (13) that are at issue in these two patents?
 (14) THE WITNESS: That's correct.
 (15) JUDGE LUCKERN: Go ahead,
 (16) Ms. Kordziel.
 (17) MS. KORDZIEL: Yes, Your Honor.
 (18) BY MS. KORDZIEL:
 (19) Q. I just wanted to follow up on one
 (20) issue. The parties are - do have a dispute
 (21) regarding the term "activity" as between the
 (22) '439 and '289 patent.
 (23) Although we will discuss this later,
 (24) do you have an opinion as to whether or not
 (25) that term should be construed the same?

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XMAX(14/14)

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- (1) A. It is my opinion that it should be
 (2) construed the same for the '439 patent and '289
 (3) patent.
 (4) Q. Okay.
 (5) JUDGE LUCKERN: And let me ask you
 (6) this question then: How do you feel that a
 (7) person of ordinary skill in the art would
 (8) interpret this term "activity" as is set forth
 (9) in these two patents?
 (10) THE WITNESS: The term "computer
 (11) activity" has no specific meaning in our
 (12) industry, so I would interpret it based on what
 (13) it meant to a person of ordinary skill in the
 (14) art. And simply put, to me the term computer
 (15) activity simply represents the particular
 (16) status of a user's computer.
 (17) JUDGE LUCKERN: Well, is it your
 (18) position that - I take it this term is used in
 (19) these two patents, correct?
 (20) THE WITNESS: That's correct.
 (21) JUDGE LUCKERN: Is the patentee making
 (22) - I mean, defining it themselves? In other
 (23) words, they are being - you are not a patent
 (24) agent, are you, or patent lawyer?
 (25) THE WITNESS: No, I am not.

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- (1) JUDGE LUCKERN: But does this term -
 (2) a patentee can be its own lexicographer. In
 (3) other words, he or she can define terms which
 (4) are original, et cetera, and that's the way
 (5) that patentee wants the patent to be
 (6) interpreted.
 (7) Are you saying that here these
 (8) patentees - we only have one, Liflick -
 (9) decided how to define this term activity and it
 (10) is something that he himself has put forth as
 (11) far as how that definition should be used in
 (12) the patent and nobody would understand it
 (13) unless they read the patent and see how he is
 (14) defining it? Do you understand what I am
 (15) saying?
 (16) THE WITNESS: Well, Mr. Liflick has
 (17) obviously defined when he has used the term
 (18) computer activity in quite a few places in both
 (19) '289 and '439 patent and recall that both of
 (20) those patents, they do share a lot of
 (21) specifications in common.
 (22) So, again, there is no specific
 (23) definition of what a computer activity is, but
 (24) there were plenty of references as far as what
 (25) a computer activity could mean in the context

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- (1) of these two Liflick patents.
 (2) Again, it is my opinion that in the
 (3) industry that there is no specific definition
 (4) that's typically associated with the term
 (5) computer activity, so I would interpret it, you
 (6) know, from the standpoint of a person of
 (7) ordinary skill in the art in 1999 in
 (8) conjunction with what the patent specification
 (9) indicated on the meaning of computer activity.
 (10) JUDGE LUCKERN: But you stated in your
 (11) answer there were a lot of references. So is
 (12) it your testimony that there are a lot of
 (13) references around as of March 24th, 1999 that
 (14) would have given some sort of definition to
 (15) this computer activity?
 (16) THE WITNESS: When I say reference,
 (17) reference from the patent specification, from
 (18) the '289 and the '439 patent specification
 (19) themselves.
 (20) JUDGE LUCKERN: You weren't referring
 (21) to other references?
 (22) THE WITNESS: No, I am not.
 (23) JUDGE LUCKERN: Ms. Kordziel, please
 (24) continue.
 (25) BY MS. KORDZIEL:

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- (1) Q. So, Mr. Chang, if you could just give
 (2) us a brief overview of the or identify the
 (3) accused Alacatel Business System products that
 (4) you reviewed and studied for purposes of this
 (5) investigation.
 (6) A. Sure. I reviewed two sets of Alacatel
 (7) Business System products. One is called
 (8) OmniEnterprise, OmniPCX Enterprise system or
 (9) OXE. And that includes the OmniPCX Enterprise
 (10) PBX system in conjunction with the OmniTouch
 (11) unified communication software suite, which
 (12) sometimes we would use the term OTUC for short,
 (13) and along with associated Softphone programs
 (14) that typically comes with the OmniTouch unified
 (15) communication software suite. So that's one
 (16) set.
 (17) And the second set is what we call OXO
 (18) system. OXO stands for OmniTouch PBX office.
 (19) It is a mid-range to small-range PBX system in
 (20) conjunction with the PIMphony software. It is
 (21) a set of cellphone and personal information
 (22) management software that's bundled in
 (23) conjunction with the OXO system.
 (24) Q. Just so the record is clear, I believe
 (25) I heard you say OmniTouch Office system. Did

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XMAX(98/98)

Page 755

- (1) CDX-251-1, these are all CDX's, 251-2, 251-3,
 (2) 251-4, and also 250. That does it?
 (3) (Complainant's Exhibit Numbers
 (4) CDX-251-1, CDX-251-2, CDX-251-3, CDX-251-4, and
 (5) CDX-250 were received into evidence.)
 (6) MR. CORDELL: Yes, Your Honor. CDX-20
 (7) which was also discussed in Mr. Serafin's
 (8) testimony was actually one of Mr. Chang's
 (9) slides and will be admitted through Mr. Chang.
 (10) JUDGE LUCKERN: All right. I want to
 (11) get these in, at least offered while we still
 (12) have Mr. Chang in, so don't forget, you
 (13) parties, to do it.
 (14) MR. CORDELL: Absolutely.
 (15) JUDGE LUCKERN: What about time for
 (16) yesterday?
 (17) MR. CORDELL: The time we have met and
 (18) conferred on and the totals, just to make sure
 (19) I am doing this correctly, were 75 minutes for
 (20) the Complainants and then 65 minutes for
 (21) Respondents. But they are going to absorb the
 (22) four minutes used by Mr. Lloyd because he was
 (23) crossing our witness, so the grand total for
 (24) Respondents is now 69 minutes.
 (25) JUDGE LUCKERN: Okay. Grand total for

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- (1) MR. LLOYD: Nothing from the staff,
 (2) Your Honor.
 (3) JUDGE LUCKERN: We will recess and we
 (4) will come back here in the morning. I take it
 (5) tomorrow you will be able to give copies of
 (6) those stipulations, two copies for Mr. Hall, so
 (7) that I will have them, too?
 (8) MR. CORDELL: Yes, Your Honor.
 (9) JUDGE LUCKERN: Okay, fine. That's
 (10) great. Everybody have a good evening.
 (11) (Whereupon, at 6:17 p.m., the trial
 (12) recessed, to reconvene at 8:30 a.m. on
 (13) Thursday, October 11, 2007.)
 (14)
 (15)
 (16)
 (17)
 (18)
 (19)
 (20)
 (21)
 (22)
 (23)
 (24)
 (25)

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- (1) Complainants?
 (2) MR. CORDELL: 75 minutes.
 (3) JUDGE LUCKERN: I sat more than that
 (4) time yesterday but, in any event, let's hope
 (5) that we're going to finish on Monday, which is
 (6) the 15th. It seems to me we're going to finish
 (7) the way we're going.
 (8) MR. CORDELL: We did take some time
 (9) with the business about the stipulation which
 (10) we could assess to both parties, but it won't
 (11) make a difference to the totals.
 (12) JUDGE LUCKERN: Well, as long as we
 (13) finish on the 15th is all, this will be Monday,
 (14) the 15th. So I will still ask you for the
 (15) times tomorrow for today, and we will see where
 (16) we're going to go. Is there anything else you
 (17) want to bring to my attention, Mr. Cordell,
 (18) before we recess for the day?
 (19) MR. CORDELL: Not at this time, Your
 (20) Honor. Thank you.
 (21) JUDGE LUCKERN: Mr. Nelson, anything
 (22) more you want? Anything you want to bring to
 (23) my attention?
 (24) MR. NELSON: No, Your Honor.
 (25) JUDGE LUCKERN: Mr. Lloyd?

Page 758

- (1) C O N T E N T S
 (2) WITNESS DIRECT CROSS REDIRECT STAFF
 (3) JACK CHANG 397 631
 (4) AFTERNOON SESSION: 526
 (5) EVENING SESSION: 738-end
 (6)
 (7) CONFIDENTIAL SESSIONS: 455-463, 488-570, 595-640
 (8)
 (9) E X H I B I T S
 (10)
 (11) EXHIBIT NO: MARKED RECEIVED
 (12) COMPLAINANTS
 (13) CDX-251-1..... 755
 (14) CDX-251-2..... 755
 (15) CDX-251-3..... 755
 (16) CDX-251-4..... 755
 (17) CDX-250 755
 (18) JOINT
 (19) JX-33.....392..... 753
 (20)
 (21)
 (22)
 (23)
 (24)
 (25)

BSA Certain Unified Communications No. 337-TA-598 (O/C) October 10, 2007 XMAX(99/99)

Page 759

- (1) CERTIFICATION OF TRANSCRIPTION
- (2) TITLE: Certain Unified Communications Systems
INVESTIGATION NO: 337-TA-598
- (3) HEARING DATE: October 10, 2007
LOCATION: Washington, D.C
- (4) NATURE OF HEARING: Hearing
- (5) I hereby certify that the
(6) foregoing/attached transcript is a true, correct, and
complete record of the above-referenced proceeding(s)
(7) of the U.S. International Trade Commission.
DATE: October 10, 2007
- (8) SIGNED: LASHONNE ROBINSON
- (9) Signature of Contractor or the Authorized
Contractor's Representative
1220 L Street, N.W, Suite 600
(11) Washington, D.C. 20005
- (12) I hereby certify that I am not the Court
Reporter and that I have proofread the
(13) above-referenced transcript of the proceeding(s) of
the U.S. International Trade Commission, against the
(14) aforementioned Court Reporter's notes, for accuracy in
transcription in the spelling, hyphenation,
(15) punctuation and speaker identification, and did not
make any changes of a substantive nature. The
(16) foregoing/attached transcript is a true, correct, and
accurate complete transcription of the proceeding(s).

- (17) SIGNED: JOHN D. LASHER
- (18) Signature of Proofreader
- (19) I hereby certify that I
(20) reported the above-referenced proceeding(s) of the
U.S. International Trade Commission and caused to be
(21) prepared from my notes of the proceedings a true,
correct, and complete transcription of the
(22) proceeding(s).
- (23) SIGNED: KAREN K. BRYNTESON
- (24) Signature of Court Reporter
- (25)

Exhibit 9

**EXHIBIT REDACTED IN ITS
ENTIRETY**

Exhibit 10



US005329578A

United States Patent [19]

Brennan et al.

[11] **Patent Number:** 5,329,578[45] **Date of Patent:** Jul. 12, 1994[54] **PERSONAL COMMUNICATION SERVICE WITH MOBILITY MANAGER**

5,239,577 8/1993 Baes et al. 379/201

OTHER PUBLICATIONS[75] **Inventors:** Paul M. Brennan, Toronto; Raymond M. Mark, Mississauga, both of Canada

PCT Publication #WO 91/07838—Published May 30, 1991.

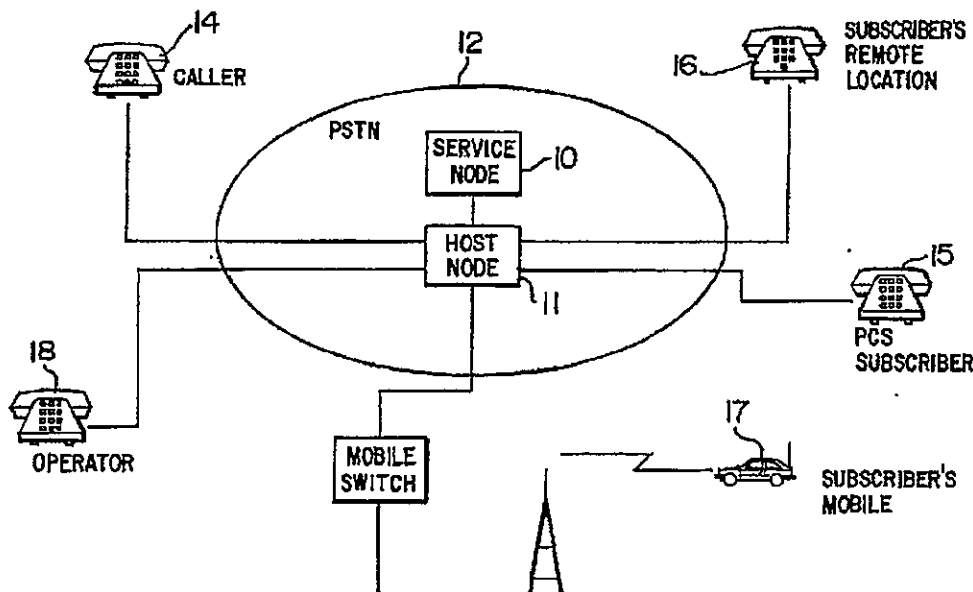
[73] **Assignee:** Northern Telecom Limited, Montreal, Canada*Primary Examiner*—James L. Dwyer
Assistant Examiner—Fan Tsang
Attorney, Agent, or Firm—Jean-Pierre Fortin[21] **Appl. No.:** 887,758[57] **ABSTRACT**[22] **Filed:** May 26, 1992[51] **Int. Cl.⁵** H04M 1/64; H04M 3/42[52] **U.S. Cl.** 379/67; 379/88; 379/89; 379/97; 379/196; 379/201; 379/211[58] **Field of Search** 379/67, 88, 89, 196, 379/97, 201, 207, 210, 211, 212, 213, 214, 217, 374

A system for providing personal communication services (PCS) is described, wherein a subscriber can tailor the telephone service to provide communication mobility and incoming call management. Calls to a personal number assigned to the subscriber are routed to a PCS service node which will re-route the call according to the subscriber's service profile stored in a database. The service node insures that attempts to communicate with the subscriber are handled with appropriate consideration for who is calling, when the call is made, and the urgency of the call. In addition, the subscriber is given control over how the system will work for them in routing incoming calls.

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11 Claims, 17 Drawing Sheets

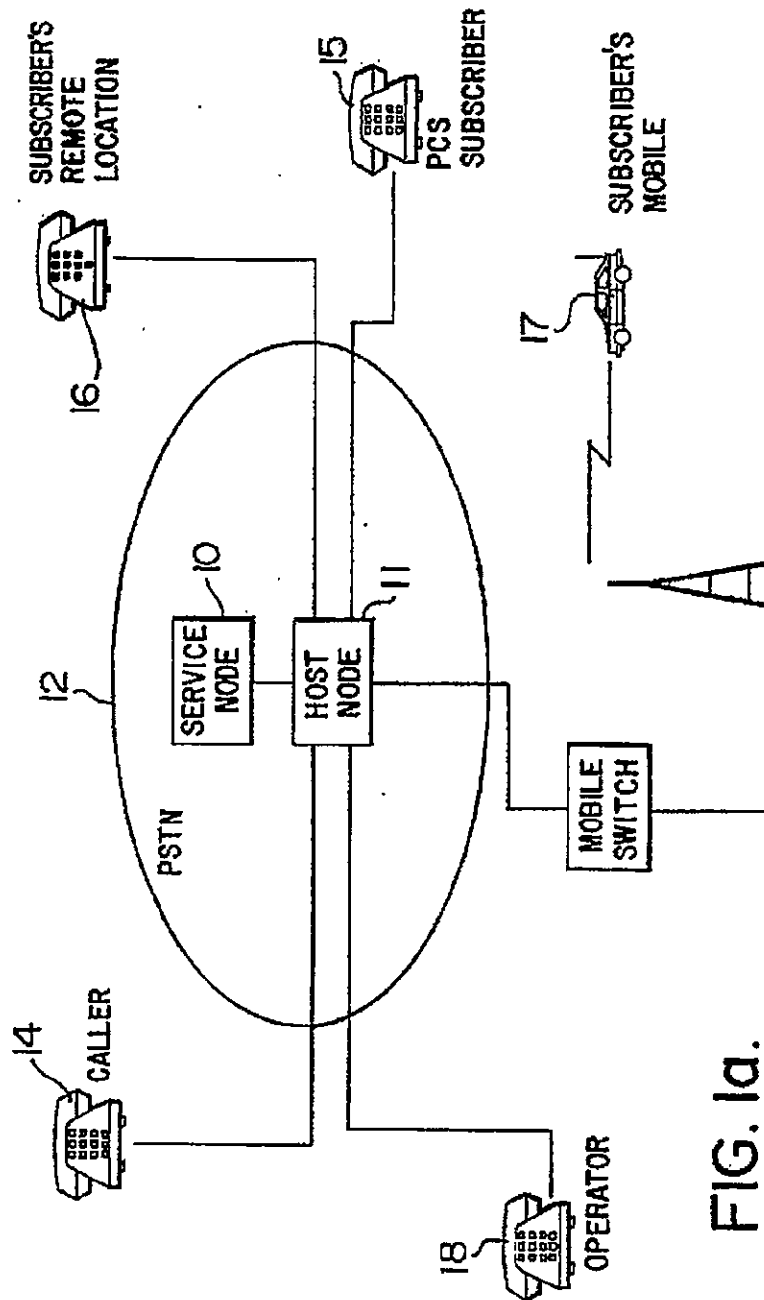


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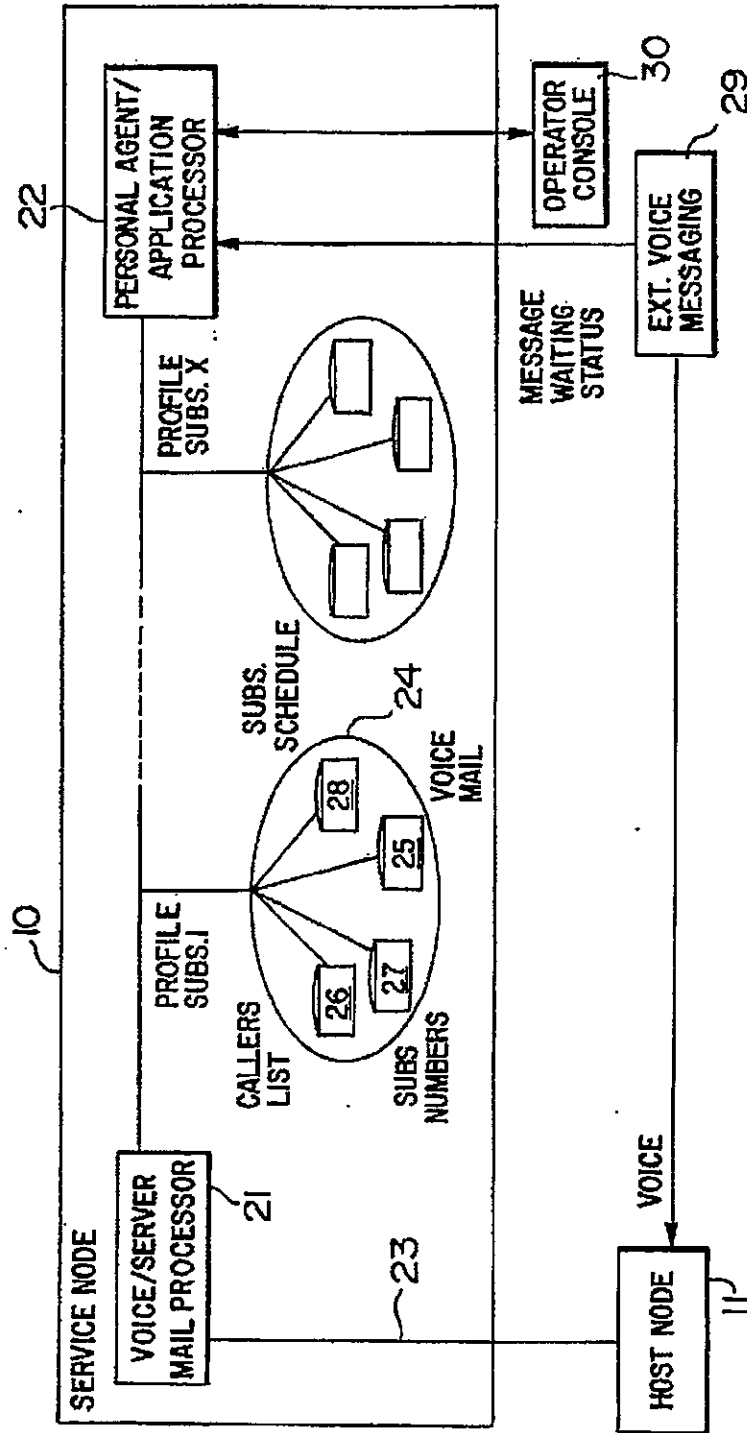


FIG. 1b

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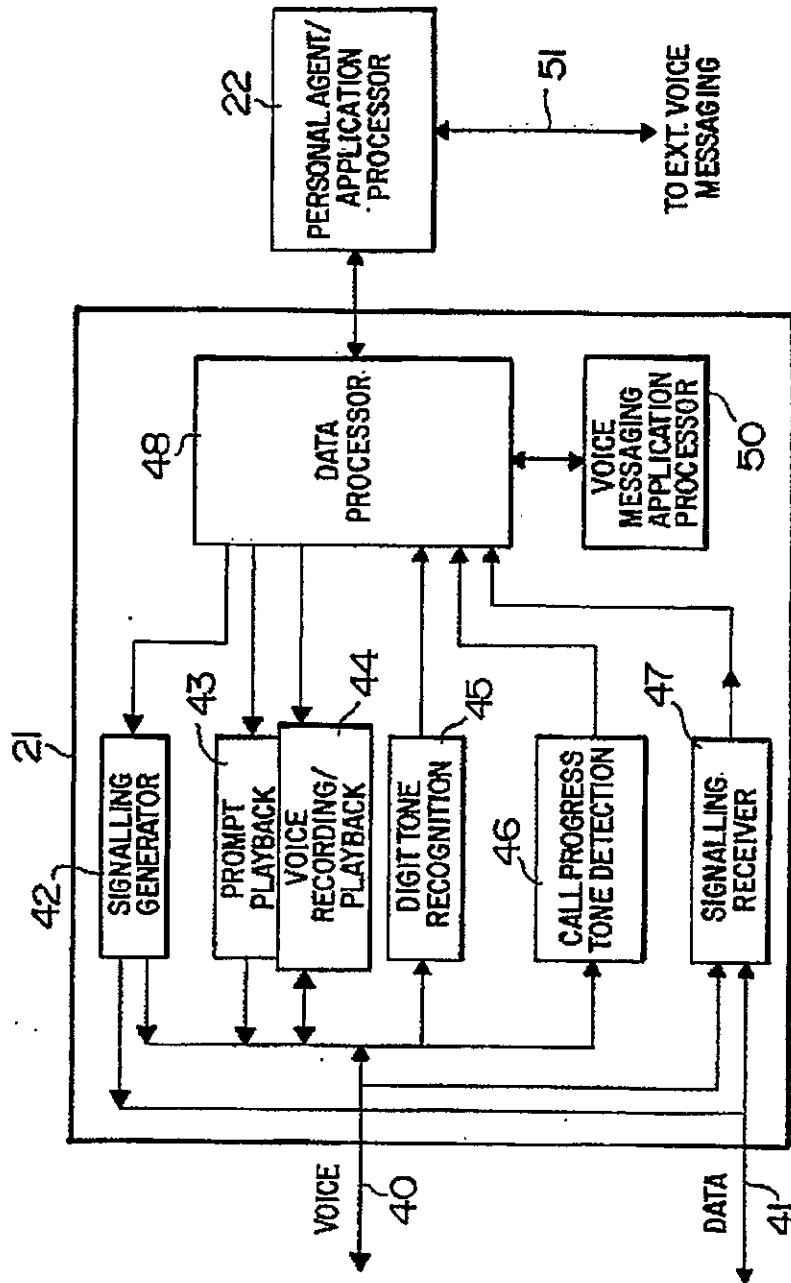


FIG. 1C

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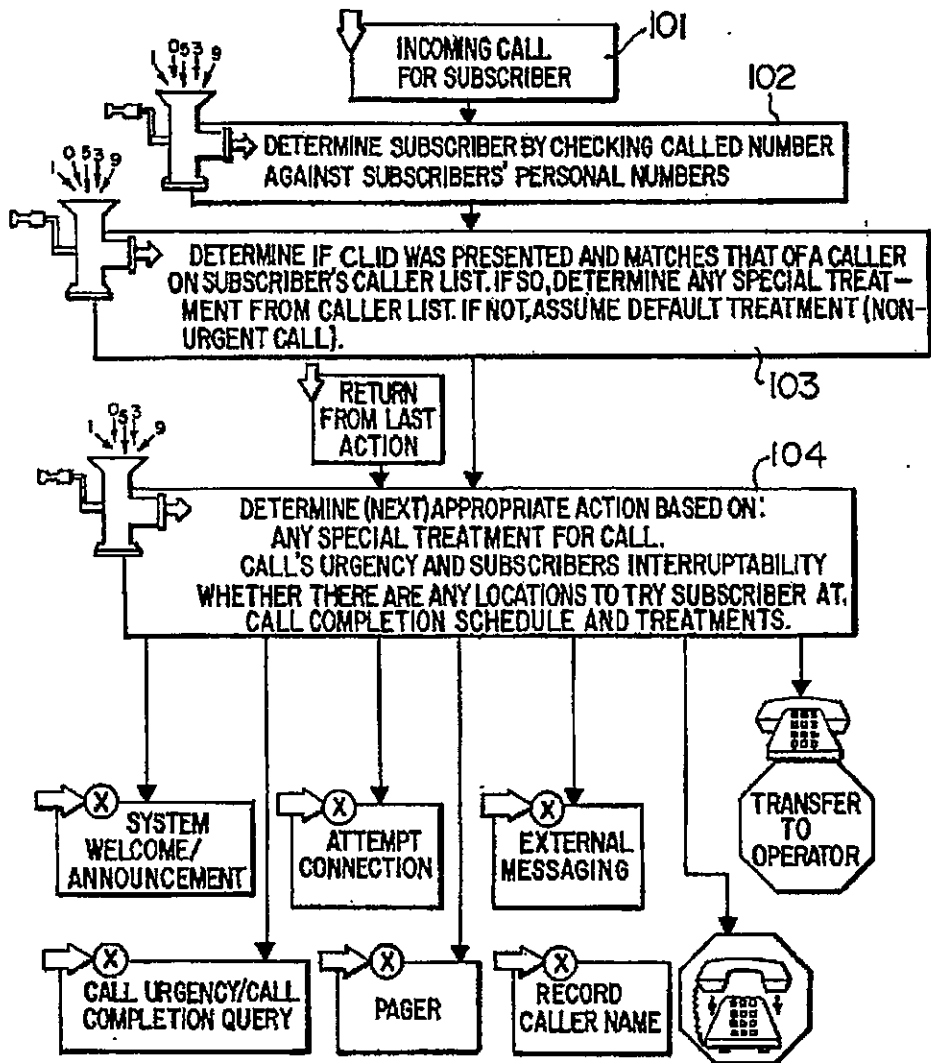


FIG. 2a

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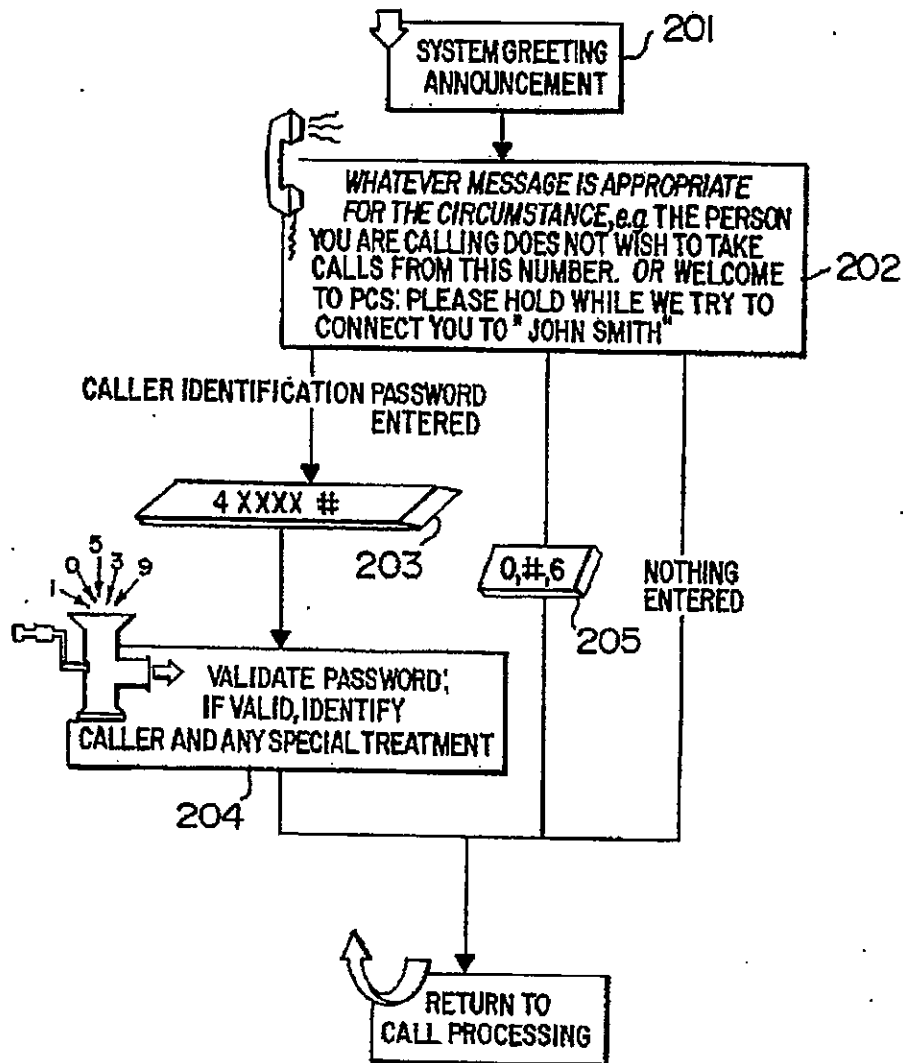


FIG. 2b

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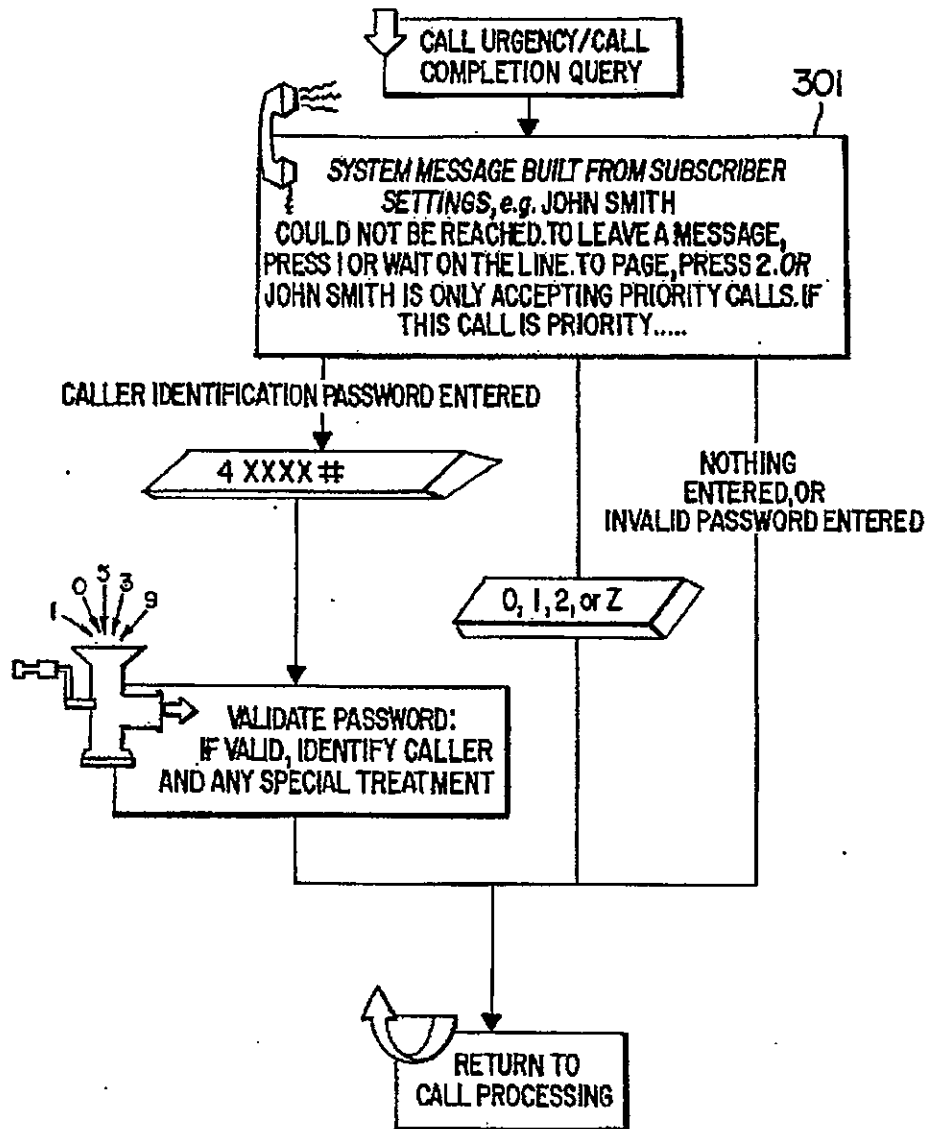


FIG. 2c

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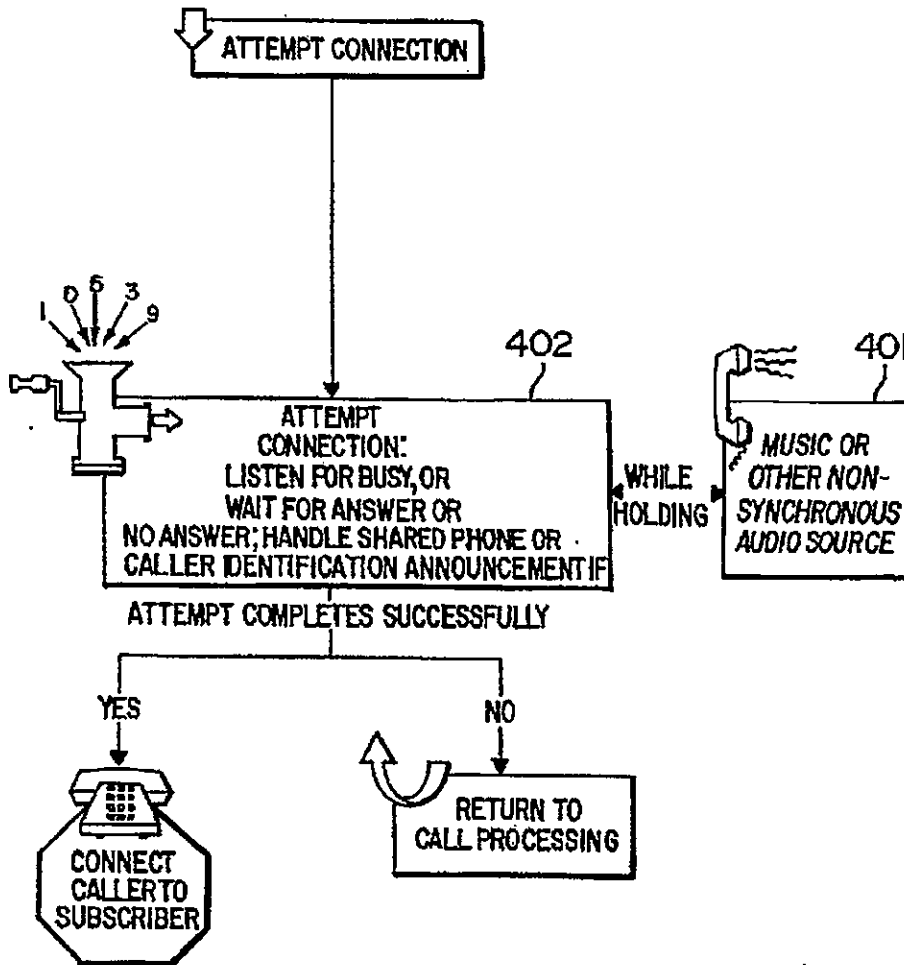


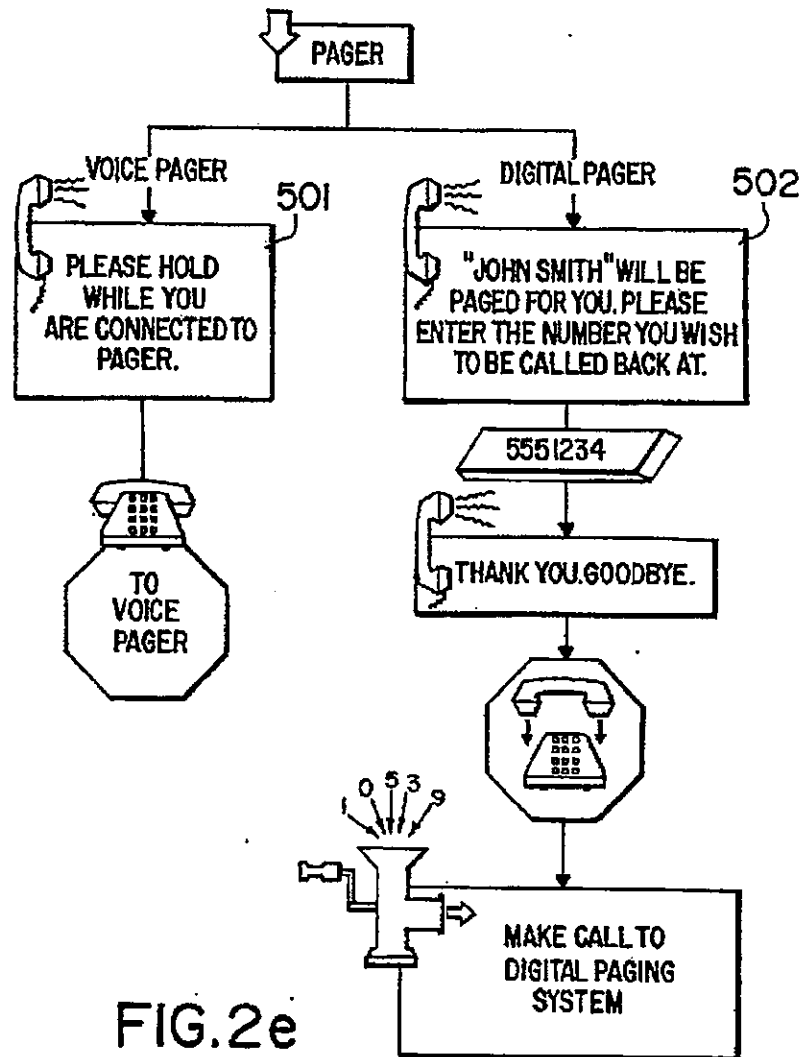
FIG. 2d

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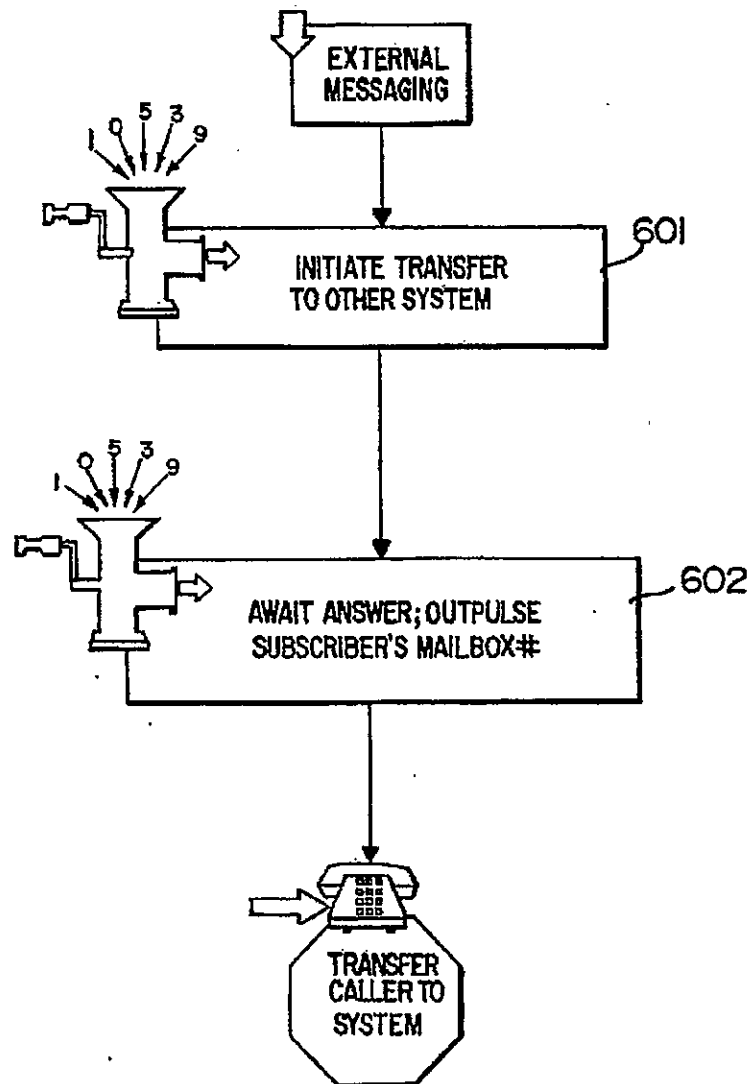


FIG. 2f

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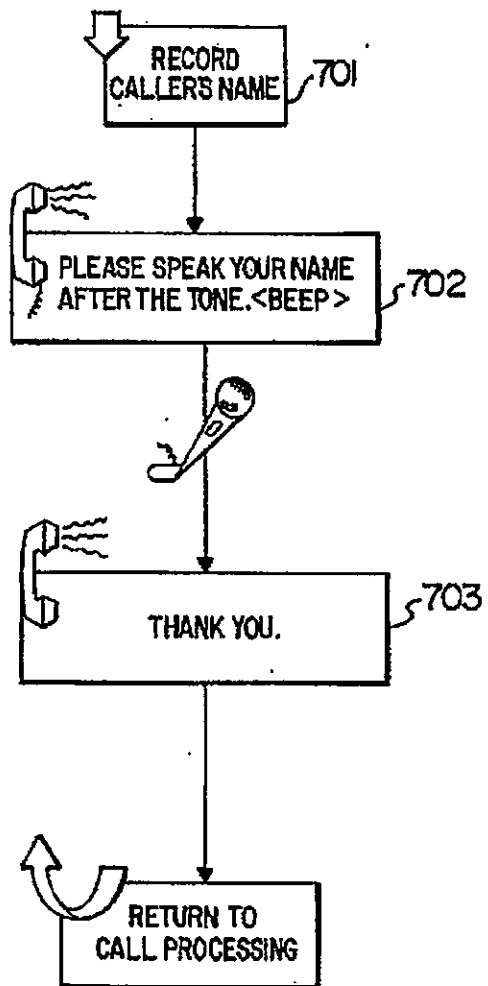


FIG.2g

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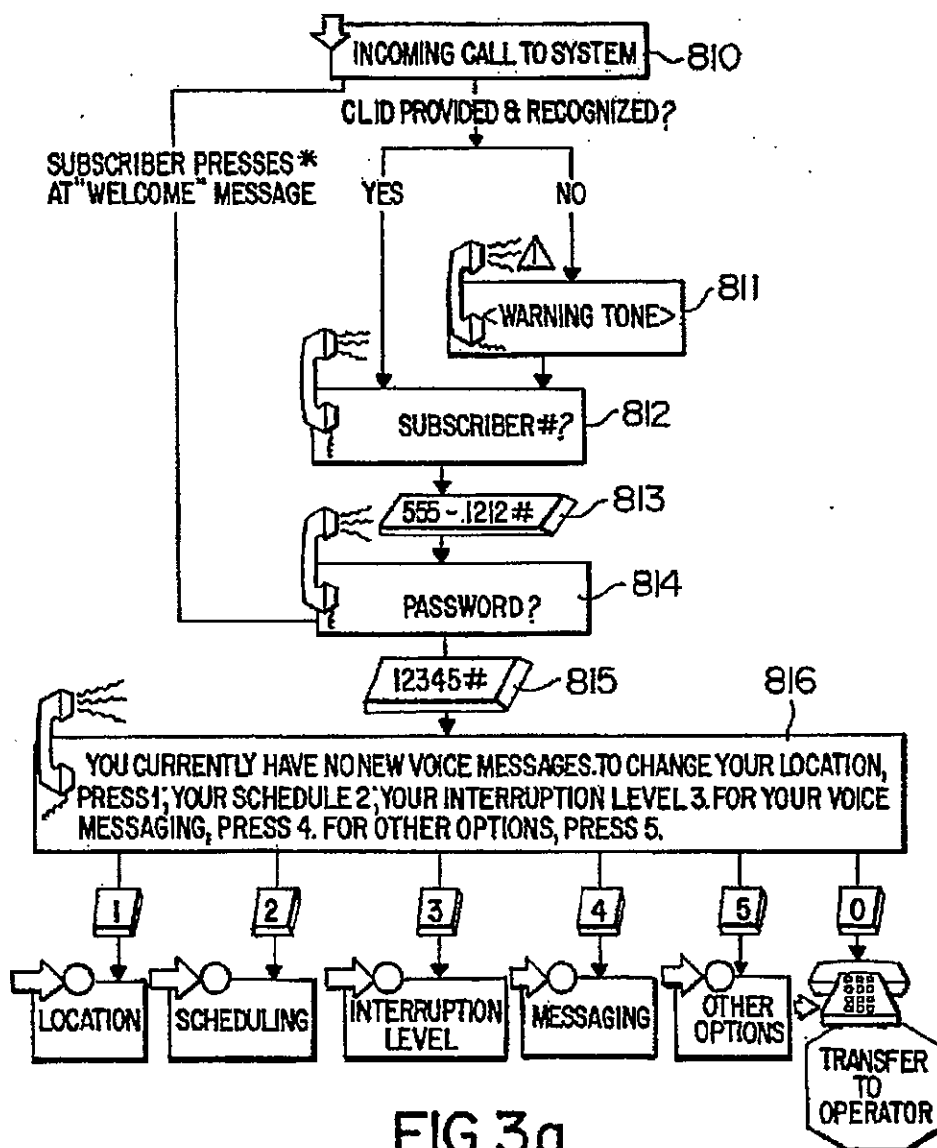


FIG. 3a

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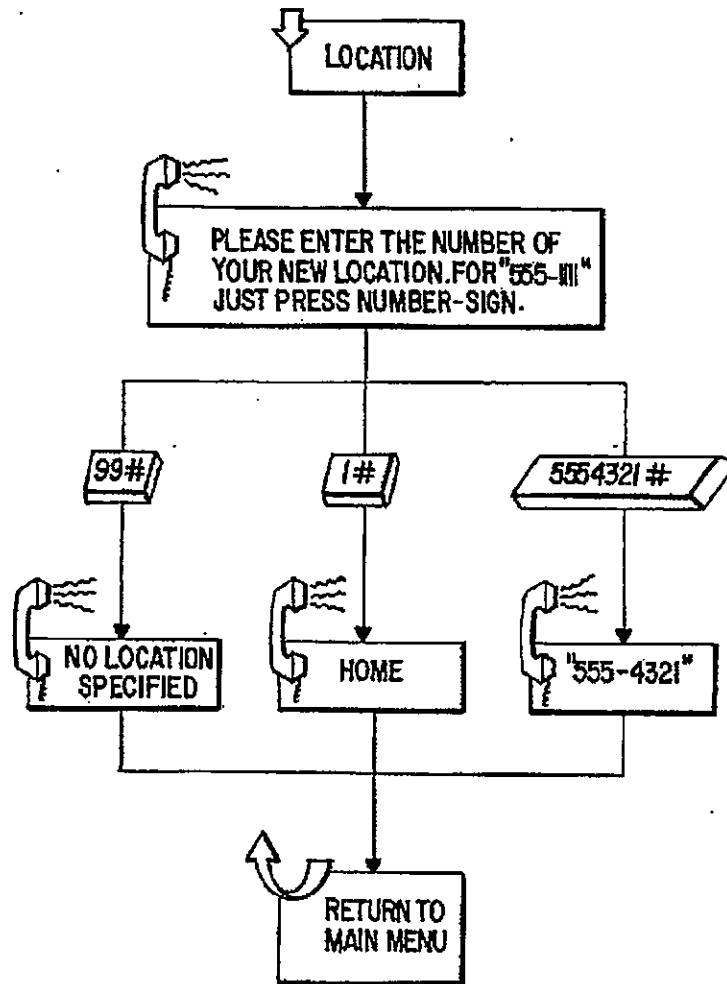


FIG.3b

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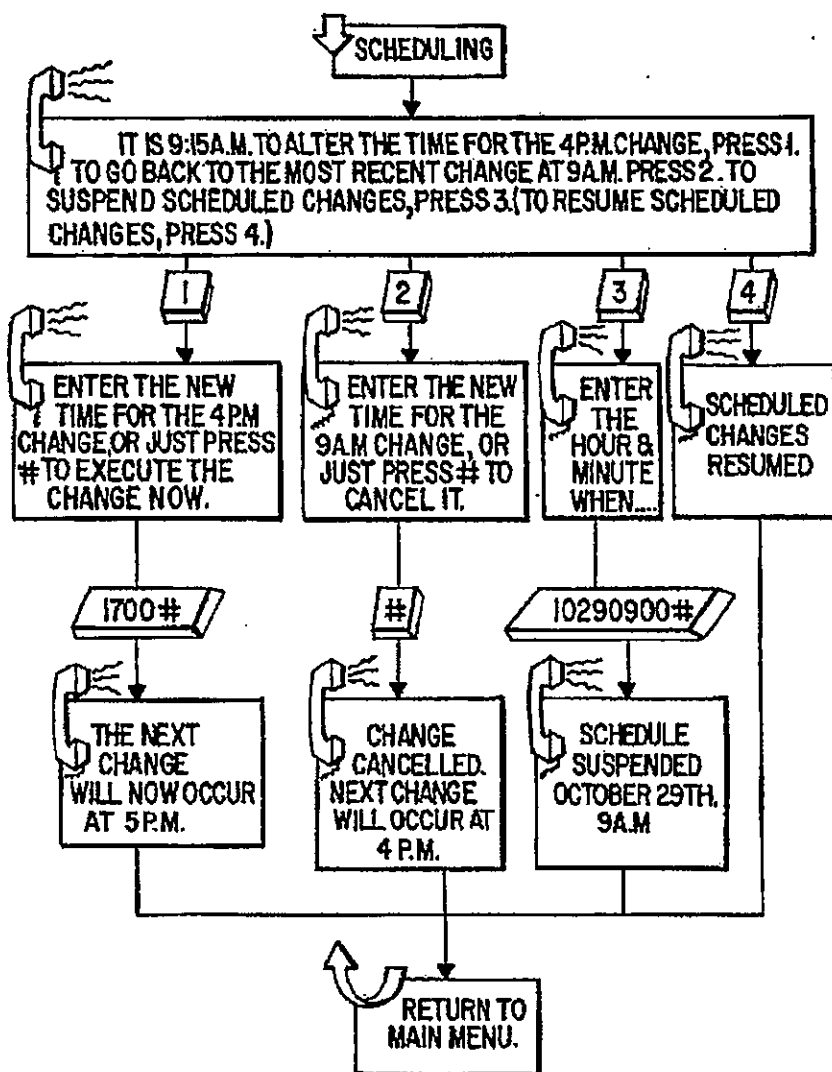


FIG.3c

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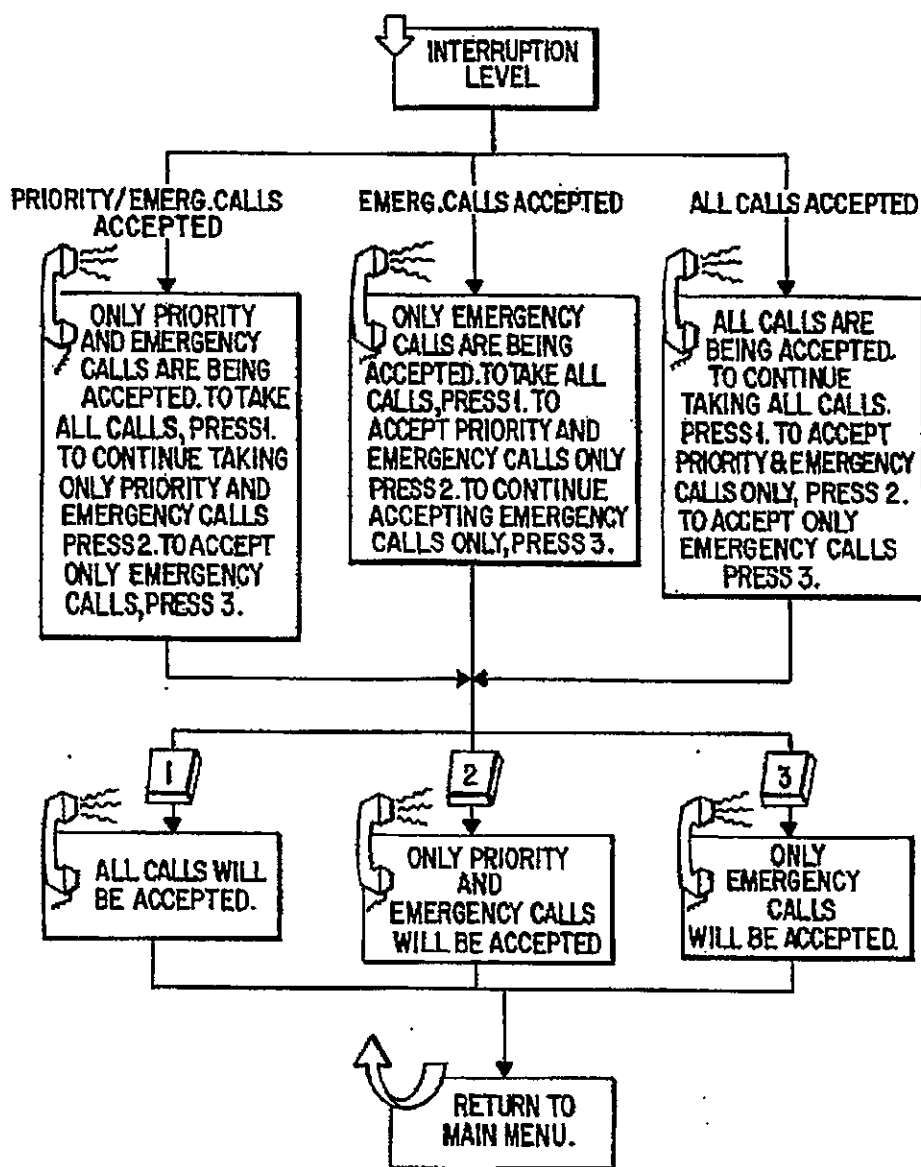


FIG. 3d

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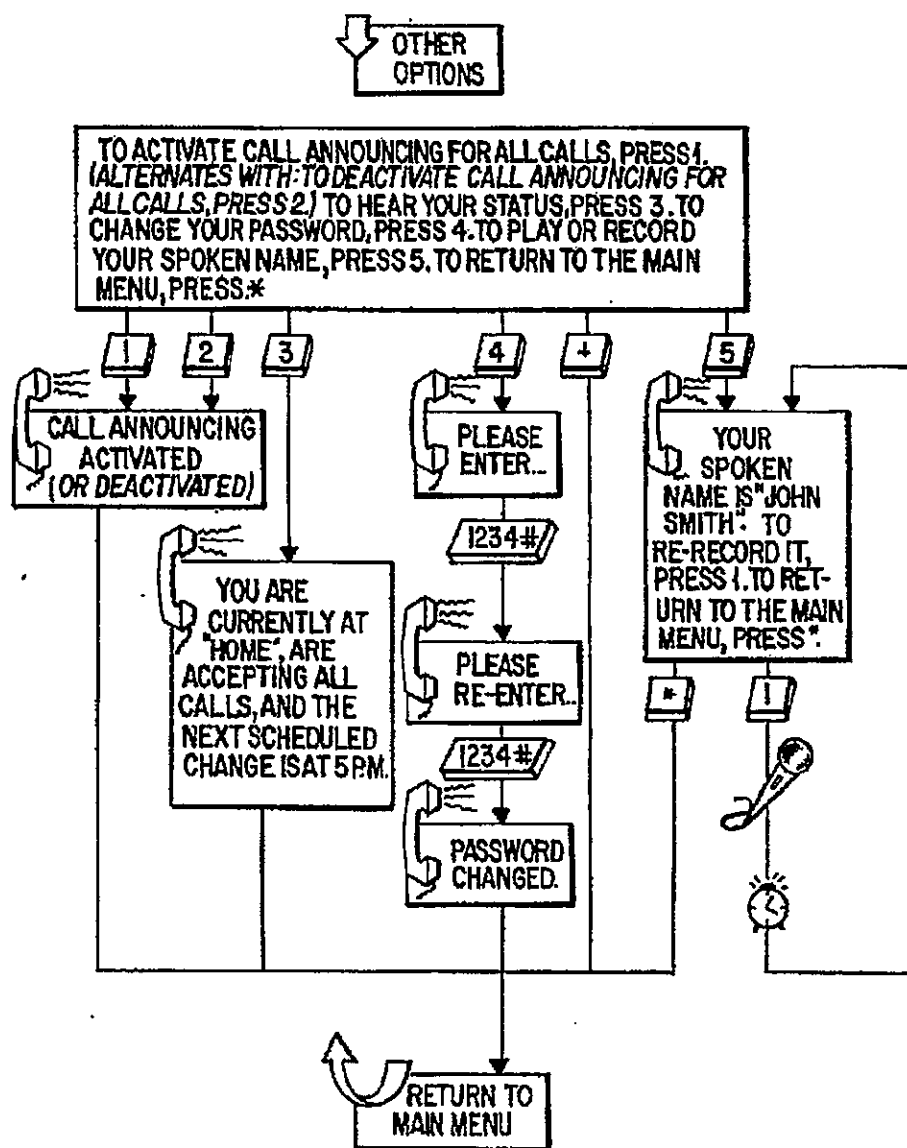


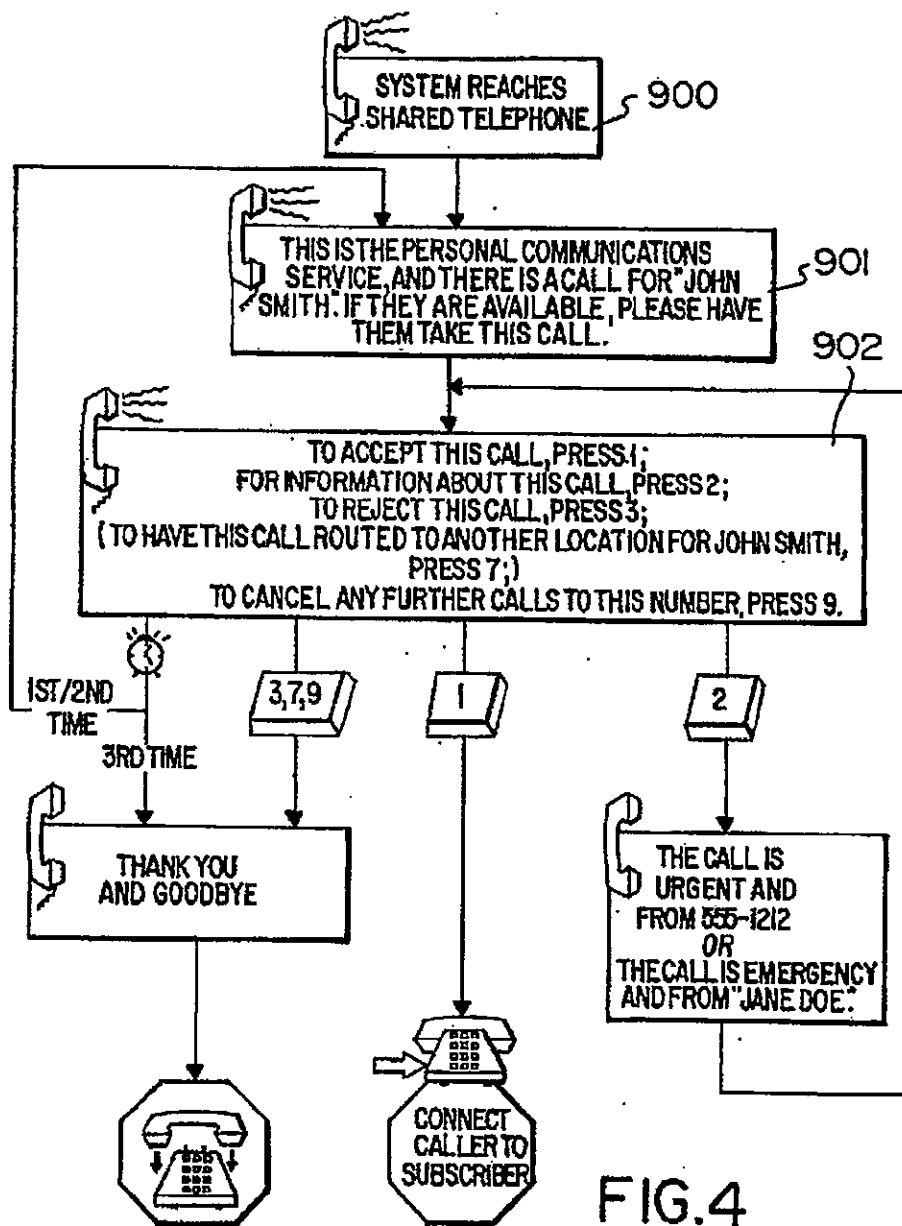
FIG.3e

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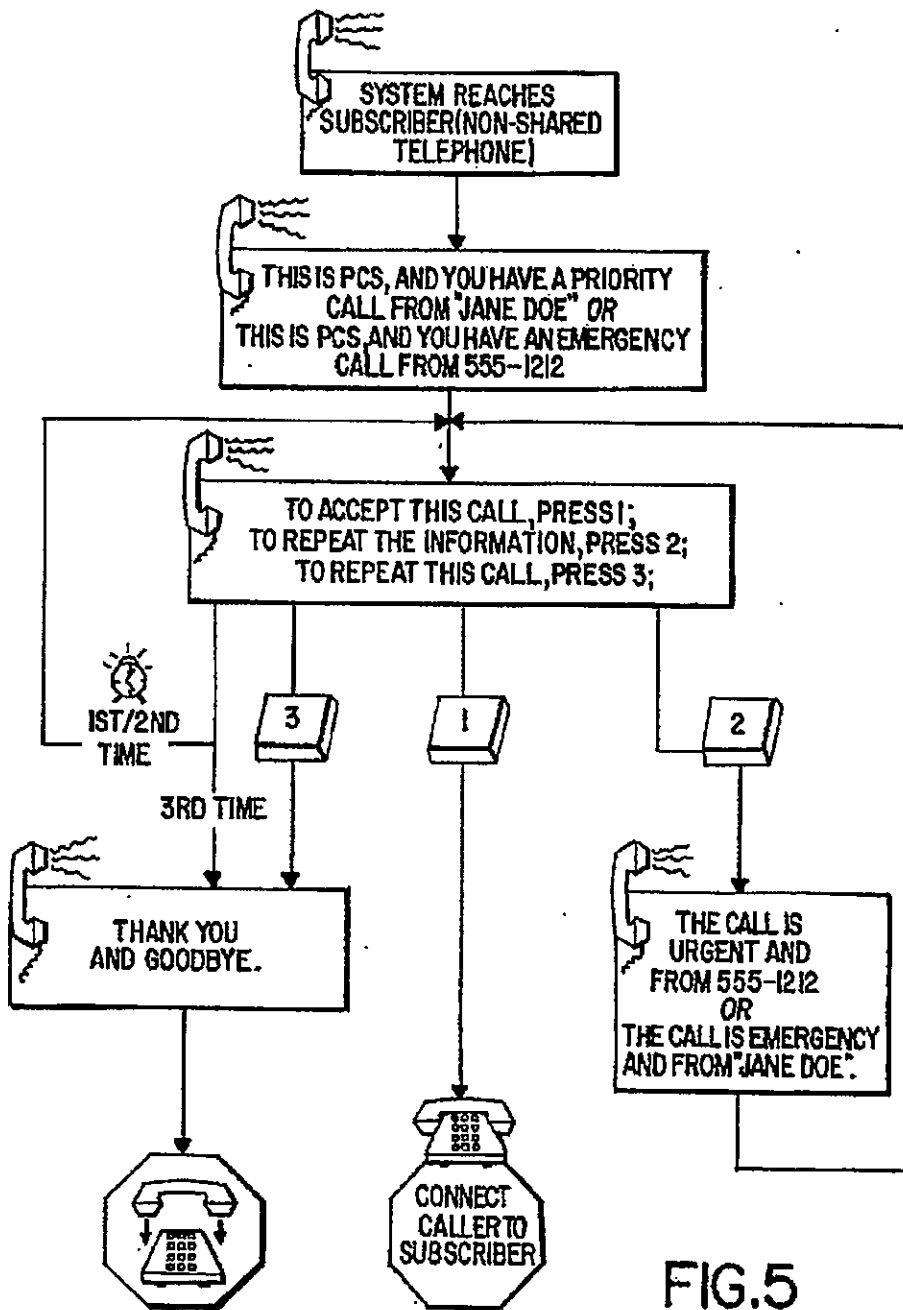


FIG.5

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PERSONAL COMMUNICATION SERVICE WITH MOBILITY MANAGER

FIELD OF THE INVENTION

This invention relates to personal communication services (PCS), but more particularly, to systems for providing a mobility/management service wherein the subscriber can tailor the telephone service to provide communication mobility and incoming call management.

BACKGROUND OF THE INVENTION

Increasingly, there is a demand for telephone services that provide easier access to a called party. For example, a new type of service is being introduced in which subscribers are provided with a single, personal telephone number used to access those subscribers regardless of their physical location. For example, callers to a personal number may automatically be connected to a business, residence, cellular or other phone, or voice messaging system, depending on where the individual they are trying to reach happens to be at the time of the call. The problem with some existing systems is that they are usually adapted to be connected externally of the telephone exchange and are therefore ill-adapted to provide efficient use of network wide features. For example, these systems cannot make use of Calling Line Identification (CLID) network features for the routing or treatment of incoming calls.

Accordingly, there is a need for a personal communication system which can be easily integrated with a network and able to offer incoming call management and communication mobility while making use of network based features.

SUMMARY OF THE INVENTION

In the personal communication service (PCS) of the present invention, calls to a personal number are routed to a PCS service node, which manages the communications services for all subscribers. The portion of the system providing PCS to an individual subscriber is hereinafter referred to as Personal Agent (PA). The Personal Agent ensures that attempts to communicate with an individual are handled with appropriate consideration for who is calling, when the call is made, and the urgency of the call. In addition, the PCS provides the subscriber personal control over the way in which the resulting system will work for them.

In accordance with one feature of the present invention, the personal communication system supports subscribers by providing communication mobility and incoming call management.

In accordance with another feature of the present invention, mobility support is provided by "Hunting", that is, attempting to contact the subscriber at a sequence of likely locations until the subscriber is reached.

In accordance with another feature of the present invention, mobility support is provided by allowing subscribers to store the ringing time allowed at each location or device when the system is attempting to reach the subscriber.

In accordance with another feature of the present invention, mobility support is provided by "Subscriber Scheduling", which allows scheduled location changes

with the ability to override them when necessary by means of a "Schedule Override".

In accordance with another feature of the invention, mobility support is provided to subscribers located outside of their normal toll area by enabling calls to be forwarded to the remote location with long distance charges automatically directed to the subscriber's calling card account.

In accordance with another feature of the present invention, mobility support is provided by a "Shared Phone Call Announcing" service which allows the subscriber to send calls to locations which are not exclusively used by the subscriber.

In accordance with another feature of the present invention, the personal communication system supports subscribers by providing incoming call management.

In accordance with another feature of the invention, incoming call management is provided with a "Special Callers List" feature to identify those callers who should receive forced urgency, call announcing, or call blocking treatment.

In accordance with another feature of the invention, incoming call management is provided with use of Calling Line Identification (CLID) feature for routing or providing special treatment of incoming calls, according to their CLID in conjunction with "Special Callers List" features.

In accordance with another feature of the invention, incoming call management is provided with a "Subscriber Interruptibility" feature which allows the subscriber to establish the urgency of calls they are willing to accept, that is, normal, priority or emergency calls.

In accordance with another feature of the invention, incoming call management is provided with a "Call Completion Query" feature, which, if desired by the subscriber, allows callers to determine how their call is to be routed if the subscriber can't be reached.

In accordance with another feature of the invention, incoming call management is provided with an "Operator Service" feature which, if desired by the subscriber and permitted by the system provider, allows callers to be connected to a system or private operator, (e.g. secretary).

In accordance with another feature of the invention, incoming call management is provided with a "Subscriber's Schedule" feature which can be used by the subscriber to automate regular changes in the urgency of calls they wish to accept.

In accordance with another feature of the invention, incoming call management is provided with a "Schedule Override" feature which allows the subscriber to easily depart from their normally scheduled call management service.

In accordance with another feature of the invention, incoming call management is provided with a "Call Completion Treatment Schedule" feature which can be used by the subscriber to indicate the treatment provided to the caller at various times when the subscriber cannot be reached.

In accordance with another feature of the invention, incoming call management is provided with an Internal or External "Messaging Service" which provides voice messaging functionality when the subscriber cannot be reached or does not wish to be disturbed.

In accordance with another feature of the invention, incoming call management is provided with an "Announcement of Caller Identification" which allows

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subscribers to make the decision to take a call once they know who is calling.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1a is a block diagram showing the interaction of the PCS service node within the Public Switched Telephone Network;

FIG. 1b is a block diagram of an embodiment of the service node for providing the personal communication services of the present invention;

FIG. 1c is a more detailed block diagram of the service node according to an embodiment of the present invention;

FIG. 2a is a general flowchart of the main caller interface;

FIG. 2b is a general caller interface flowchart showing the system greeting/announcement service;

FIG. 2c is a general caller interface flowchart showing the call urgency/completion query service;

FIG. 2d is a general caller interface flowchart showing the caller attempt connection;

FIG. 2e is a general caller interface flowchart showing how a call is directed to a pager;

FIG. 2f is a general caller interface flowchart showing how a call is directed to an external messaging system;

FIG. 2g is a general caller interface flowchart showing how a caller's name is recorded;

FIG. 3a is a general subscriber service interface flowchart showing how the main menu is accessed;

FIG. 3b is a general subscriber service interface flowchart showing how to specify a new location;

FIG. 3c is a general subscriber service interface flowchart showing how to modify the subscriber schedule;

FIG. 3d is a general subscriber service interface flowchart showing how to set the interruption level for incoming calls;

FIG. 3e is a general subscriber service interface flowchart showing how to access other options of the service;

FIG. 4 is a general interface flowchart for providing shared phone call announcement; and

FIG. 5 is a general interface flowchart of the caller identification announcement service.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the present specification, Personal Number (PN), is the term used for the single number used to access someone regardless of their physical location. The portion of the system providing PCS to an individual subscriber is referred to as that subscriber's Personal Agent (PA).

A number of network functions or configurations are required for PCS features to work properly or most efficiently. It will be evident from those knowledgeable in the art that additional network functions and enhancements can be made with the proper modifications of the network configuration. The following are network functions or configurations and the PCS features that they enable or enhance:

Calling Line Identification (CLID), when a subscriber is calling allows the subscriber service control interface to more efficiently identify the subscriber and/or the subscriber location. Also, when someone is calling the subscriber, CLID allows the PCS to manage calls based on the calling number and the special callers list. Without CLID, callers

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will require passwords to identify themselves to the system, which will require the callers to have DTMF signalling. Failing this, the subscriber's PA will have to act as if the caller is unidentified.

PN setup. When an existing number is reconfigured to be the subscriber's PN, a new number will be required for the location previously addressed by the PN. If this is not provided, PCS will not be able to terminate calls to the subscriber at that location due to destination looping.

Location configuration. When a subscribers identify themselves at a location, PCS expects calls to that location to ring unanswered, ring busy, or be answered by a human.

PCS Bypass. When PCS Bypass is enabled for a location/device on the subscriber's list, care must be taken to configure that location/device so that unanswered and/or busy calls are returned to PCS.

As is shown in FIG. 1a, a service node 10 for providing PCS services is connected to a host node 11 forming part of the Public Switched Telephone Network (PSTN) 12. The host node 11 can, for example, be comprised of a central office switch, such as a DMS-100 (Trademark) digital telephone switch, available from Northern Telecom. When a caller 14 dials the personal number (PN) of a PCS subscriber 15, the call is intercepted by the host node 11 as being a call directed to a PCS service subscriber. From this point on, the service node 10 will interact with the host node 11 to attempt call completion according to the subscriber's profile contained at the service node 10. This can be, but is not limited to, either one of the subscriber's base location 13, remote location 16, subscriber's mobile telephone 17, subscriber's voice messaging service (not shown) or operator 18.

As shown in FIG. 1b, the service node 10 interacts with the host node 11, by making use of a voice/server mail processor 21 and a personal agent/application processor 22 used for accessing service profiles 24 of one or more subscribers. These components are currently available from Northern Telecom, as Meridian Mail Voice Processor (MMVP), and dual processor Meridian Application Equipment Module (AEM). Meridian is a Registered Trademark of Northern Telecom.

Network connectivity and switching functions can be carried out by a voice switch (not shown), or host node 11. The service node 10 is connected to host node 11 and the network 12 via an ISDN Primary Rate Access (PRA) link 23, or an equivalent link able to carry voice and signalling information. This link transports call information between the service node 10 and the host node 11. Call information includes the original dialled number, calling line identification, call redirection information, called number, etc.

The personal agent/application processor 22 makes use of databases 24 which contain the service profiles of the PCS subscribers, for providing the subscriber with communication mobility and incoming call management. Database 24, can either form an integral part of the application processor 22, voice processor 21 or be part of a separate storage facility. One of the files making up the subscriber's profile is the voice messaging file 25. This file contains information about the subscriber's voice messaging service, such as what types of message will be played, access codes required for accessing voice mail from a remote location, etc.

Another file which makes up the subscriber's profile is the Callers List 26. This list stores the identities of

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callers requiring special treatment, and the special treatment that is provided to them. Callers can be identified by CLID, or by an Identification Password entered through DTMF. An Identification Password can be given by the subscriber to a group of callers, allowing all of them access to the same special treatment, without the subscriber having to individually identify them all on the Caller List 26. A special treatment can be a System Announcement, in situations where the subscriber does not wish to communicate with the caller, or Messaging if the subscriber is willing to take messages from the caller but does not want to have the caller directly connected. Also, a special treatment can give a call a Normal, Priority, or Emergency status, if the call is to be forced to a specific status level. CLIDs can be specified by range, allowing the subscriber to give special treatment to a group of callers, e.g. all callers in local area code are routed to Messaging. A name can be associated with each entry in the list. This name is used to help in any list validation and simplify communication of subscriber requirements to the service administrator.

An example of a typical Caller List is shown below in Table 1.0

TABLE 1.0

NUMBERS	NAME	PASSWORD	SPECIAL TREATMENT
123-1111	GRANDMA		PRIORITY
444-1212	X-SPOUSE		MESSAGING
444-1313			
521-1212	X-SPOUSE'S LAWYER		SYSTEM ANNOUNCEMENT 1
555-9999	FAMILY	911911	PRIORITY
632-1234	BOSS	8020	ANNOUNCEMENT 2
452-XXXX	BRW		ANNOUNCEMENT 3

In table 1.0, "Numbers" show the CLID(s) associated with the caller. If a call from this CLID is directed to the subscriber, the special treatment will automatically be provided. If a caller enters a password associated with an entry in the Callers List, that caller will be identified to the subscriber, in a Shared Phone Announcement, by the CLID associated with that password and entry.

"Name" is a text string associated with an entry, for use by the system operator or service representative. It is also provided to the subscribers when a printed copy of the profile is sent to them for verification purposes.

"Password" is a numeric string that can be entered by a caller, and when entered, will provide the caller with the special treatment associated with that entry.

"Special Treatment" is the special handling that callers identified as being associated with this entry will receive. Important callers may receive "Priority" or "Emergency" call status, other callers may be designated to receive only a Messaging treatment, or just one of a set of pre-recorded system announcements.

Referring again to FIG. 1b, another file which also makes up the subscriber's profile is the Subscriber Number List 27. This list stores the network addresses and types of the devices and usual destinations to be used when communicating with the subscriber or leaving a message for the subscriber. The Subscriber Number List can also store the ringing time allowed at each device when attempting to connect a call. This flexibility allows calls to be progressed at the optimal speed.

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For example, slowly past devices which the subscriber needs time to answer, and quickly past devices which would be answered almost immediately if the subscriber was there to take the call.

An example of a Subscriber Number List is shown below in Table 2.0.

TABLE 2.0

ID	NAME	NUMBER	TYPE	RINGS
1	HOME	123-1234	BY-PASS ALLOWED	5
1	OFFICE	555-1234	SOLE USE	3
3	CAR	999-1234	ANNOUNCE CALLER	2
4	COTTAGE	777-1234	SHARED	5
OTHER DEVICES		NUMBER		
PAGER:		555-1155		
TYPE:		DIGITAL		
MESSAGE SYSTEM:		923-2222		
MAILBOX NUMBER:		1234		
MAILBOX PASSWORD:		555		
MWI COORDINATION:		YES		
OPERATOR:		333-4567		

As shown in Table 2.0, "IDs" are numbers used to refer to specific devices by the subscriber when changing locations, e.g. only "1#" is needed to identify the subscriber's home location.

"Name" is the pre-determined system name for locations. This can be Home, Car, Portable, Office, Cottage, Boat, etc.

"Number" is the network address of the device.

"Type" indicates whether the Shared Phone Call Announcement should occur when calls are extended to that device/location, or if all calls to that device/location should have the caller announced, or if the device can be "by-passed" (this indicates whether PCS can bypass itself when a call is directed to this location when filtering or call announcing is not required).

"Rings" indicates how long a device should be rung before "no-answer" is assumed.

"Other Devices" include the possible destinations for completing calls when a subscriber can't be reached. These can be a pager, a messaging system, or a private operator. Sufficient information is provided to allow PCS to complete the call to these destinations.

Also part of the subscriber's profile is the Subscriber's Schedule 28. Some subscribers may wish to change, at regular intervals, the way their calls are managed, e.g. only emergency calls after 11 p.m. weekdays and after midnight on weekends. Further, they may have a pattern of movement from device to device which can also be described in a schedule. The Subscriber's Schedule allows, for example, the elimination of subscriber and/or operator interaction to support regularly occurring changes. Multiple time slots can be specified, e.g. Monday-Friday 0900-1700 hours, Saturday 1030-2330 hours, and "other" which defines what happens for non-specified time slots. For each of these predefined time slots, the Schedule can list the default devices to use in contacting the subscriber during that time, e.g. Monday-Friday 0730-0800 hours use car or home number, Monday-Friday 0800-0830 hours use car or office number. This schedule could be set for the subscriber who spends half an hour commuting each morning, leaving sometime between 8:00 and 8:30 a.m.. Similarly, the Schedule allows each slot to have an urgency of calls which the subscriber will accept, e.g. only urgent

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calls after 5 p.m. on weeknights and on weekends. Those subscribers who do not use scheduled changes can have a single, all-inclusive entry in their schedule, indicating their default location and interruptability.

An example of the Subscriber Schedule is shown below in Table 3.0.

TABLE 3.0

DAY	TIME	INTERRUPT- ABILITY	DEVICES
M-F	8-9	NORMAL	CAR, OFFICE
M-F	9-17	NORMAL	OFFICE
M-F	17-23	PRIORITY	HOME, CAR
SA-SU	9-17	PRIORITY	HOME, CAR, COTTAGE
DS-SU	17-23	PRIORITY	HOME, CAR
OTHER		EMERGENCY	HOME

"Day" and "Time" are used to determine which time period(s) and entry in the schedule applies to.

"Interruptability" indicates the urgency of calls that the subscriber will accept during the time period(s) specified by the entry.

"Devices" indicates which device(s)/location(s) are to normally be used when attempting to connect to the subscriber during the time period(s). Names refer to entries in the Subscriber Number List.

In addition to the Subscriber Schedule, a Call Completion Schedule is used to determine what action the system should take with a call when the caller is normally allowed to reach the subscriber, but the subscriber couldn't be reached, or was not interruptible. Table 4.0 shown below provides an example of a Call Completion Schedule.

TABLE 4.0

DAY	TIME	TREATMENT	URGENCY
M-F	9-17	MESSAGE	NORMAL
M-F	9-17	OPERATOR	PRIORITY
M-F	17-23	QUERY (MESSAGE, PAGER)	PRIORITY
M-F	17-23	MESSAGE	NORMAL
SA-SU	8-20	QUERY (MESSAGE, PAGER)	PRIORITY
SA-SU	8-20	MESSAGE	NORMAL
OTHER		MESSAGE	NORMAL
OTHER		QUERY (MESSAGE, PAGER)	EMERGENCY

"Day" and "Time" indicates which days and over which time ranges a particular treatment will be provided to a caller. "Other" is used to refer to all times not otherwise specified.

"Treatment" indicates what should be done with a call that could not be terminated by connecting it to the subscriber. Options are "Message", "Pager", "Operator", and "Query". "Query" treatment results in the caller being asked for his choice of 2 or more of the 3 available treatments.

"Urgency" indicates that only calls of at least the specified urgency are to receive that treatment. This allows calls of different urgencies to be terminated differently, e.g. to an operator (secretary) or to messaging.

Also part of the subscriber's profile are other Data files which store other subscriber information necessary to operate PCS or provide the subscriber with prompt and courteous operator service. An example of this data is shown below in Table 5.0.

TABLE 5.0

PERSONAL NUMBER:	416-555-1111
BYPASS ACCESS:	416-555-9999

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TABLE 5.0-continued

BYPASS PASSWORD:	12345
NAME:	SUBSCRIBER NAME
PASSWORD:	1234
OTHER PERSONAL #S:	
MESSAGING PASSWORD:	9876
CALLING CARD #:	416 555-1212 XXXX
LANGUAGE:	ENGLISH
ALLOWED FEATURES:	PAGER, SYSTEM OPERATOR REVERT, URGENCY
CALL ANNOUNCE NAME:	NO
RECORDING:	
CALL URGENCY QUERY:	PRIORITY
ROTARY DEFAULT:	NORMAL
NOTES:	CUSTOMER IS HARD OF HEARING - SPEAK SLOWLY AND CAREFULLY WHEN GIVING ASSISTANCE

"Personal Number" is the PN of the subscriber.

"Bypass Access" and "Bypass Password" are used to directly route the Personal Number to an allowed subscriber location, using a network based forwarding feature.

"Other Personal #s)", "Name", and "Notes:" are examples of textual comment fields which can be associated with the subscriber profile to facilitate service.

"Password" is the identification number for the subscriber, which can be used for operator verification of subscriber identity, or when the subscriber is calling the Subscriber Service Interface.

"Calling Card #" is used to charge PCS placed calls when the subscriber has directed calls to a location not local to the host node 11.

"Language" is the language to be used for the playing prompts to Subscriber's callers.

"Allowed Features" indicates which features this subscriber has access to. The options listed in Table 5.0 are for example only, and may vary according to what is specified by the PCS service provider.

"Call Announce Name Recording" indicates whether unknown callers should be prompted to record their names when Call Announcing is required.

"Call Urgency Query" can be "none", "priority", or "emergency". If "none", calls which are not assigned an urgency in the caller list will always be assumed "normal".

A Schedule Override feature has been provided since many subscriber's schedules are subject to variations. This override allows the subscriber to adjust the schedule for current circumstances without having to permanently change the schedule. For example, the subscriber can shift the next or previous scheduled change so that they occur earlier or later, or for all scheduled changes to be suspended until a future date/time. This, for example, can be useful when the subscriber is off sick, on vacation or just running a little late. Similarly, while a subscriber may normally desire that only urgent calls be connected after 5 p.m., he may wish to extend that when waiting for calls which the system will not be able to identify as urgent.

When a subscriber overrides his scheduled location to a location not in the device/location list, the new location will be assumed to be "shared", with PCS confirming that the subscriber is at the location before connecting the call. In this example, if three calls to the location are made, and no DTMF response is received by PCS to the confirmation request, or if the response indicates that the relocation is to be cancelled, PCS will cancel

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the location override and resume with the location specified in the schedule.

As is shown in FIG. 1a, incoming calls can be directed to standard permanently installed telephones 15, mobile telephones 17, a messaging service (reference numerals 21 and 29 of FIG. 1b), a system or private operator 18, numeric/digital pager or voice pager (not shown). If an incoming call is directed to a telephone which may be answered by someone other than the subscriber, then the telephone is specially indicated as being shared. Calls to this destination are provided with a Caller Announcing feature. Of course, calls to any other telephone devices may also be provided with the Call Announcing feature. Call completion at these devices requires DTMF verification at the destination that the subscriber is on the line and wishes to take the call before a caller is connected.

The PCS can transfer a call directed to a subscriber to a pre-determined external messaging system 29. If necessary, the PCS can enter the subscriber's mailbox code to prevent the caller from having to do this. Callers to a PCS subscriber whose call is to be sent to messaging will be automatically transferred to that subscriber's mailbox on the internal or external system. The target messaging system should of course be configured to operate this way. To handle caller identification overrides and emergency calls, the PCS will warn the caller to hold while their call is transferred to an external messaging system. The period of warning can be used as the "window" in which a caller can enter an identification password, or "0" for emergency/operator treatment. Subscribers to PCS can log in to their external messaging system by selecting an option in the Subscriber Service Interface. This option will result in PCS placing the subscriber on hold and a call made to the external messaging system. The PCS will then output the subscriber's mailbox number and password and then drop out of the loop.

When a subscriber uses the internal, integrated voice messaging 50, the person-system interface is optimized. No PCS command "window" is required prior to transferring a caller, as the message system's "greeting" is sensitive to the PCS commands and responds appropriately, returning the caller to the PCS application if necessary. Mailbox numbers, passwords, and other information, such as the caller's number and the call's urgency, can be passed between the Personal Agent and Voice Messaging Application processors via the data processor 48 without the delays involved in waiting for an external system to answer and in outputting this data via DTMF. The integrated system can allow the subscriber to switch from messaging to PCS, allowing them to change PCS configurations after listening to their messages. The integration and data sharing between the PCS and messaging applications also allows for integrated statistics and billing data to be easily connected.

The PCS can also transfer a call to a PCS system operator, who can access the subscriber's Personal Agent data to determine why the subscriber can't be reached, or provide any other service offered by the operator. Similarly, the PCS can transfer the call to a subscriber defined Private Operator. This could be the subscriber's secretary, an external answering service, or other appropriate destination.

When the call is directed to a Numeric/Digital pager, the pager receives and displays a numeric message entered by the caller. If the caller does not enter a digital

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code for transmission to the pager, the PCS can provide the pager with the CLID of the caller, if it is known.

The voice pager receives a voice message recorded by the paging system. The PCS can transfer the caller directly to the paging system and leave the rest of the interaction under the control of the paging system.

Another feature disclosed with the present invention is the Hunting feature. There are times when the subscriber may be moving fairly often between a fixed set of locations (e.g. a construction manager who is away from his desk on and off all day, and carries a portable cellular phone with him when he is away). Hunting allows contact to be made with subscribers without the subscribers having to constantly update their locations manually. This feature allows the subscriber to list up to three locations by which the system is to attempt to contact him. The system will normally "hunt" to the next location if the subscriber doesn't answer, or a call to a shared telephone is answered and it is indicated that the subscriber is not there. The system is designed to stop hunting to the next location in the list if a location is busy.

Referring now to FIG. 1c, we have shown a more detailed block diagram of the voice/server mail processor 21 of the service node 10. The voice/server mail processor 21 is adapted to receive/send voice information on a voice channel 40 and data or signalling information on a data channel 41. The processor 21 is comprised of a signalling generator 42 adapted to initiate, establish and transfer calls when connected to the data channel 41 and generate DTMF signalling to external devices via the voice channel 40. The external devices can be a pager, or external voice messaging system. A prompt playback unit 43 stores various prompts which are sent to the calling party or the subscriber, when either is communicating with the system. The prompt playback unit 43 sends this information along voice channel 40. These prompts are usually the ones provided by the service provider, such as "The person you are calling does not wish to take calls at this time." or "Welcome to PCS; please hold while we try to connect you to —John Doe—". The voice recording/playback unit 44 is used for the recording and playback of the voice of an incoming caller, when the caller is asked to leave a message, or of the subscriber, when the subscriber wants to modify the welcoming message of his or her voice mail.

The DTMF recognition unit 45 is used to detect and recognize DTMF tones sent by the calling party or subscriber, when either is connected to PCS. The call progress tone detection unit 46 allows the system to detect busy, fast busy, re-order, ringing, etc., when PCS is attempting to place a call. The signalling receiver 47 is used to detect Calling Line Identification (CLID), called number, incoming calls, end of call, reason for call forwarding, etc. The type of information received will of course be dependent on the connection technology used.

The data processor 48 routes information to and from a functional block serving a call, i.e. elements 42 to 47, to the correct application processor. For example, during a PCS call, information is routed to and from the personal agent application processor 49, whereas, during the use of the system's internal voice mail, information is directed to and from the voice messaging application processor 50. The data processor 48 is also used for communicating between the two processors allowing

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the switching of application and for each application to use data accumulated by the other.

The following description of FIGS. 2a-2g is directed at describing the flow of information at the caller interface. That is, when an individual attempts to contact a PCS subscriber. The precise interface that the caller has with the PCS will depend on the subscriber's requirements and the specific PCS features in use for the subscriber. In some cases, it is possible that the caller will not have any obvious interaction with the PCS, and in others, will respond to Call Completion or Call Urgency Queries and be provided with status information. The caller will normally have available four single-digit DTMF commands. These can, for example, be:

- enter password (e.g. the numeral 4 key to prefix the password);
- operator assistance request (zero key);
- skip over welcome message (#key);
- skip directly to messaging (numeral 6 key); and
- login - subscriber's calling (key)

Additionally, callers may be requested to make a Call Completion or Call Urgency determination via DTMF signals.

In conjunction with FIGS. 1a to 1c, we can now refer to FIG. 2a, where we have shown a flowchart diagram illustrating the general caller interface options that may be available to a caller attempting to reach a PCS subscriber. Once the call has been identified as described above as being directed to a PCS subscriber, block 101, the personal agent 22 of the service node determines which subscriber profile to use, by checking the called number against the personal numbers of all PCS subscribers, block 102. In FIG. 1c, the signalling receiver 47 detects the called number and passes this to PA 22 via data processor 48, allowing the personal agent 22 to access the subscriber profile corresponding to the number called. Then, as described at block 103, the signalling receiver 47 and data processor 48 of service node 21 determines if the incoming call included the CLID. If there is a CLID, the personal agent 22 would access the profile 24 of the subscriber to determine whether the CLID matches that of a caller on the subscriber's Caller List 26. If so, then as shown at block 103, any special treatment is determined from the Caller List (see Table 1.0). If not, the default treatment is assumed, i.e. a non-urgent call.

Referring now to FIG. 2b, if the appropriate treatment is a System Greeting/Announcement 201, the caller will be connected to PCS and a voice channel 40 will become available. The personal agent 22 will instruct the data processor 48 to activate the prompt playback 43 to play the appropriate message 202. The message played to the caller again will depend on the CLID, or default treatment. Whenever a caller is hearing a PCS prompt 202, including a Call Completion Query or Call Urgency Query, they can enter an Identification Password 203 (assuming they have knowledge of one). This associates the caller with a CLID in the Special Caller List, and gives the caller the same Priority or Emergency call service associated with that CLID. This identification mechanism allows callers to receive this Priority or Emergency treatment when calling from another number or when CLID is not provided, or to override the default treatment when circumstances warrant. If the caller does enter an ID password 203, it will be detected by the DTMF detection circuit 45. The information would be passed via data processor 48 to the personal agent 22 allowing it to

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determine or confirm the identity of the caller 204 and the treatment to be provided. Also, the caller can enter other single digit commands 205, for introducing a password, skipping greetings, and immediate messaging. Again, depending on the digits, the DTMF recognition circuit 45 and data processor 48 would alert the personal agent 22 of the caller's input for the necessary treatment. If nothing is entered, the call would be processed as per the default treatment, i.e. messaging or prompt.

Callers can be queried by the system, as shown in FIG. 2c, if desired by the subscriber. For example, as shown at block 301, the caller can be asked their choice of leaving a message for the subscriber or paging the subscriber. Caller responds by keying a digit. A query can also indicate that the subscriber has requested that only "priority or emergency" calls be accepted, and ask the caller to use DTMF to signal if their call is of that level of importance. The query allows for appropriate defaults so that callers incapable of responding can be handled.

Some subscribers may have a requirement for their callers to be given a choice of routing when the subscriber cannot be reached, i.e. Call Completion Query. If a subscriber has requested this feature, the system will automatically query the caller as to which routing they desire. For example, calls can be routed to messaging, a pager (either voice or digital) or an operator.

Callers are not given any progress indication once the system has welcomed them and is handling their call, unless the system cannot connect the call to the subscriber, in which case, a prompt informing the caller is issued, and the completion treatment is performed. During this period, the system can be set-up so that the callers hear a non-synchronous audio source, as shown at block 401 of FIG. 2d. This could be music, or a custom recording.

When a connection with the subscriber is attempted, the personal agent 22, will provide the necessary signalling information to the data processor 48 so that the signalling generator 42 can initiate a call according to the subscriber's profile. This information, will be the result of the subscriber's schedule 28, subscriber's number list 27, the treatment provided to the caller and other appropriate data. As shown at block 402, the system will listen for a busy tone or wait for an answer or no answer. This is accomplished by the call progress tone detection 46. The call attempt will be made using one of the data or signalling channels 41 and a voice channel 40. If the call is made to a shared phone or callers announcement is required, the proper prompts will be played to the person answering the call. The calling party will only be connected to the far end if it is answered and, when necessary, the subscriber accepts the call by DTMF signals.

Calls directed to voice or digital pagers and external messaging systems are processed as shown at 501 and 502 of FIG. 2e and at blocks 601 and 602 of FIG. 2f, respectively. In either one of these cases, the signalling generator 42, would be directed by the personal agent to call the pagers or external messaging number and a call completion attempt will be made as described above.

When a Caller Identification Announcement is required with caller name recording, the call will be processed as shown at block 701-703 in FIG. 2g. In this case, the voice recording/playback unit 44 will be activated to record the caller's voice. Once the subscriber

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answers the call, the voice recording/playback unit will play the caller's voice to announce the caller to the subscriber.

The following description of FIGS. 3a-3e is directed at describing the flow of information for the Subscriber Service Interface when a subscriber attempts to access his or her PCS subscriber profile. The Subscriber Service Interface is directly accessed by the subscriber calling a special number, or by calling his own personal number and pressing *. This interface shows the possible mechanisms for the subscriber to control some of his most dynamic data. The interface would change depending on which features were provided to the subscriber(s). Of course, the system data and profile changes can also be done by a system operator, at the subscriber's request.

When a subscriber places a call into the PCS system, block 810, the subscriber's CLID, if known, allows the subscriber service interface to more efficiently identify the subscriber and/or the subscriber's location. If the calling number is not known, e.g. in a situation where the subscriber calls from, say a pay phone, a warning tone is heard to indicate the CLID is not known and the subscriber has to enter his or her subscriber number, see block 811-813. Subsequently, the subscriber is prompted for a password, see block 814-815. With reference to FIG. 1c, when the subscriber dials the special number, the signalling receiver will connect the subscriber to the personal agent 22. The subscriber will then be able to "communicate" with the personal agent via the prompt playback unit 43, voice recording/playback unit 44 and the DTMF recognition unit 45. Thus, the subscriber and the personal agent 22 will interact using interactive voice response. That is, depending on the DTMF entered, a system prompt or voice response will be heard by the subscriber, leading the subscriber through the various options available. This is shown in FIG. 3a, at block 816.

If the subscriber has access to a messaging system, then a notification of messages waiting (or not) will be made available to the personal agent and subscriber via a Message Waiting Indicator link 51 from an extension system 29 or via the data processor 48 from the voice messaging application processor 50.

FIGS. 3b to 3e show a number of possible parameters that the subscriber can change from his or her profile. In FIG. 3b, the location where the subscriber can be reached is changed. In FIG. 3c, the subscriber scheduling is temporarily changed. In FIG. 3d, the Interruption Level is changed, and in FIG. 3e, other options are provided to the subscriber, such as, call announcing, status change, change of password, etc. As is shown, all of these are done using Interactive Voice Response technology. The subscriber is lead through all options by simply pressing the correct digits on his or her keypad.

FIG. 4 shows the flow of information for the Shared Phone Call Announcement Interface. When the system attempts to reach a subscriber at a telephone that has been indicated as "Shared", the system will announce that there is a call for the subscriber, using the spoken name of the subscriber, as recorded by the subscriber on the voice recording/playback unit 44. The call can be rejected because the subscriber is not there, or it can be accepted by the subscriber, or information about the call can be requested (e.g. CLID and urgency), and the call can then be accepted or rejected. The caller will not know if his call is being announced. He will receive the

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usual message indicating that an attempt is being made to contact the subscriber, and will either reach the subscriber (the call was accepted), continue to the next hunt location, or have the call completed elsewhere (e.g. the messaging service). This is shown in blocks 900-902 of FIG. 4.

In addition to the subscriber-verification provided by the Shared Phone Call Announcing, the system will allow for calls to be announced even when the subscriber is the only user of a telephone. This service is shown in FIG. 5. The subscriber is given a number of options on how to answer the incoming call.

What is claimed is:

1. A communication system for routing a call to a subscriber of a telephone mobility management service, wherein the subscriber of the service is assigned a unique personal telephone number, such that an incoming call made to the subscriber's unique telephone number is routed to the subscriber according to a call routing schedule tailored by the subscriber, comprising:

a) database means for storing:

- i) a list of network addresses associated with telephone devices for use by the service subscriber;
- ii) a list of calling line identification numbers (CLIDs) of callers identified by the subscriber as requiring special routing treatment; and
- iii) a subscriber schedule indicative of which one of said telephone devices an incoming call should be routed to, on the time and day the incoming call is received;

b) signalling receiver means for detecting the CLID of a caller when a call is received at said subscriber's unique telephone number;

c) data processing means for receiving the detected CLID and for accessing said list of CLIDs of callers, said list of network addresses and said subscriber schedule stored in said database means; and

d) application server means for routing the call according to the special routing treatment associated with the caller's CLID and subscriber schedule and wherein said subscriber can access said database means via said application server means and said data processor means to modify each list stored therein.

2. A communication system as defined in claim 1, wherein a call is routed by said application server means to a second telephone device provided in the subscriber schedule, if the subscriber cannot be reached at a first selected telephone device.

3. A communication system as defined in claim 2, wherein said list of network addresses associated with telephone devices for use by the service subscriber further provides the number of times a telephone device is to ring before said call is routed to said second telephone device.

4. A communication system as defined in claim 1, wherein the special routing treatment is stored with said list of CLIDs.

5. A communication system as defined in claim 4, wherein the special routing treatment is provided to incoming calls according to the area code contained with the CLID.

6. A method of routing a call to a subscriber of a telephone mobility management service, wherein the subscriber of the service is assigned a unique personal telephone number, such that an incoming call made to the subscriber's unique telephone number is routed to

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the subscriber according to a call routing schedule tailored by the subscriber, comprising the steps of:

- a) storing in database means:
 - i) a list of network addresses associated with telephone devices for use by the service subscriber;
 - ii) a list of Calling Line Identification numbers (CLIDs) of callers identified by the subscriber as requiring special routing treatment; and
 - iii) a subscriber schedule indicative of which one of said telephone devices an incoming call should be routed to, on the time and day the incoming call is received;
- b) accessing, when an incoming call is received, said list of CLIDs to determine whether the incoming call requires a special routing treatment;
- c) routing the incoming call, according to said special routing treatment and said subscriber schedule if a CLID is detected and contained on said list of CLIDs; and
- d) if a CLID is not detected, routing the incoming call according to said special routing treatment in response to predetermined DTMF tones.

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7. A method as defined in claim 6, wherein the special routing treatment is provided to incoming calls according to the area code contained with the CLID.

8. A method as defined in claim 6, wherein the incoming call is routed to a second telephone device provided in the subscriber schedule if the subscriber cannot be reached at a first telephone device.

9. A method as defined in claim 8, wherein said list of network addresses associated with telephone devices for use by the service subscriber further provides the number of times a telephone device is to ring before said call is routed to said second telephone device.

10. A method as defined in claim 6, wherein if an incoming call is routed to a telephone device which is shared between said service subscriber and another answering party, a prerecorded message will be sent to said shared telephone device such that the answering party is informed that the incoming call is directed to the service subscriber.

11. A method as defined in claim 10, wherein the subscriber can acknowledge his presence upon answering the incoming call on the shared telephone device, by dialling a predetermined DTMF code.

* * * * *

Exhibit 11

**EXHIBIT REDACTED IN ITS
ENTIRETY**

Exhibit 12

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C. 20436**

**Before The Honorable Paul J. Luckern
Administrative Law Judge**

**In the Matter of
CERTAIN UNIFIED COMMUNICATION
SYSTEMS, PRODUCTS USED WITH
SUCH SYSTEMS, AND COMPONENTS
THEREOF**

Inv. No. 337-TA-598

**COMPLAINANT'S SUPPLEMENTAL RESPONSES TO RESPONDENT'S
FIRST SET OF INTERROGATORIES 2, 11, 20, 29**

Pursuant to 19 C.F.R. §§ 210.27 and 210.29, Complainant Microsoft Corporation ("Microsoft" or "Complainant") hereby supplements its responses to Respondent Alcatel Business Systems' ("ABS" or "Respondent") First Set of Interrogatories as follows:

RESERVATION OF RIGHTS AND GENERAL OBJECTIONS

Complainant incorporates by reference the Reservation of Rights and General Objections stated in Complainant's Responses to Respondent's First Set of Interrogatories, as if fully set forth in each and every response herein.

SPECIFIC OBJECTIONS AND RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 2:

For each and every claim of the '439 Patent, describe with full particularity Your construction of each limitation of each claim, identify all intrinsic and extrinsic evidence You contend supports Your construction, including without limitation all citations to the claim language, the patent specification, and the prosecution history, and any terms You contend should be interpreted under 35 U.S.C. §112, ¶6; and provide a claim chart that sets forth Your construction and identifies all intrinsic and extrinsic evidence You contend supports Your construction on a limitation-by-limitation basis for each and every claim of the '439 Patent.

RESPONSE TO INTERROGATORY NO. 2:

Microsoft incorporates all of its general objections and reservations of rights as if specifically alleged herein. Microsoft specifically objects to this interrogatory as overly broad

and unduly burdensome to the extent it seeks constructions for claims that are not asserted in this investigation and for claim limitations that are not in dispute.

Subject to, and without waiving these objections, Microsoft states as follows:

Microsoft's proposed constructions and supporting intrinsic evidence are set forth in the table below:

	PROPOSED CONSTRUCTION	INTRINSIC SUPPORT
Telephone network	<u>Telephone network</u> = network for carrying telephony information	Abstract; Figs. 2-4; Col. 1, lns. 34-62; Col. 2, lns. 8-31, lns. 57-60; Col. 4, ln. 28-Col. 5, ln.50; Col. 6, ln. 55-Col. 7, ln. 15; Col. 7, lns. 28-56; Col. 11, lns. 1-34; Col. 12, lns. 33-53; Col. 13, ln. 63-Col. 14, ln. 11; Col. 14, ln. 13-Col. 20, ln. 14.
Computer network	<u>Computer network</u> = network for carrying digital data	Abstract; Figs. 2-4; Col. 1, lns. 44-55; Col. 3, ln. 5-Col. 4, ln. 28; Col. 6, lns. 23-54; Col. 7, lns. 16-27; Col. 13, ln. 63-Col. 14, ln. 11; Col. 14, ln. 13-Col. 20, ln. 14.
According to current activity of subscribers on the computer network or according to current activity of the user on the computer network	<u>According to current activity of subscribers on the computer network or according to current activity of the user on the computer network</u> = according to the status of subscribers on the computer network or according to the status of the user on the computer network	Fig. 7; Col. 1, ln. 65-Col. 2, ln. 4; Col. 2, lns. 57-65; Col. 7, ln. 57-Col. 8, ln. 48; Col. 8, ln. 67-Col. 9, ln. 12; Col. 9, lns. 45-55; Col. 10, lns. 15-42; Col. 11, ln. 45-Col. 12, ln. 5; Col. 13, lns. 29-62.

Microsoft does not believe that the remaining claim limitations need to be construed, as their plain and ordinary meanings are clear and well known to one skilled in the art. Microsoft reserves the right to amend or supplement its proposed constructions.

Microsoft further identifies below the extrinsic evidence it may use in support of its proposed constructions:

Encyclopedia of Networking, Electronic Edition, Tom Sheldon (1998).
Newton's Telecom Dictionary, Harry Newton (various editions).

Random House Webster's Computer & Internet Dictionary, Philip E. Margolis, 3d ed. (1999).

Microsoft Computer Dictionary, Microsoft Press, 4th ed. (1999).

The IEEE Standard Dictionary of Electrical and Electronics Terms, Standards Coordinating Committee 10, Terms and Definitions, 6th ed. (1996).

Webster's New Unabridged Dictionary (1996)

Microsoft reserves the right to amend or supplement this list of extrinsic evidence, including but not limited to dictionary definitions, citations to learned treatises and publications, as well as the testimony of expert witnesses.

INTERROGATORY NO. 11:

For each and every claim of the '289 Patent, describe with full particularity Your construction of each limitation of each claim, identify all intrinsic and extrinsic evidence You contend supports Your construction, including without limitation all citations to the claim language, the patent specification, and the prosecution history, and any terms You contend should be interpreted under 35 U.S.C. §112, ¶6; and provide a claim chart that sets forth Your construction and identifies all intrinsic and extrinsic evidence You contend supports Your construction on a limitation-by-limitation basis for each and every claim of the '289 Patent.

RESPONSE TO INTERROGATORY NO. 11:

Microsoft incorporates all of its general objections and reservations of rights as if specifically alleged herein. Microsoft specifically objects to this interrogatory as overly broad and unduly burdensome to the extent it seeks constructions for claims that are not asserted in this investigation and for claim limitations that are not in dispute.

Subject to, and without waiving these objections, Microsoft states as follows:

Microsoft's proposed constructions and supporting intrinsic evidence are set forth in the table below:

CLAIM LIMITATION	PROPOSED CONSTRUCTION	INTRINSIC SUPPORT
Telephone network	Telephone network = network for carrying telephony information	Abstract; Fig. 2; Col. 1, ln. 53-Col. 2, ln. 26; Col. 2, ln. 66-Col. 4, ln. 48; Col. 5, lns. 7-57; Col. 6, ln. 30-Col. 7, ln. 64; Col. 11, lns. 9-40; Col. 15, ln. 25-Col.

	CLAIM LIMITATIONS	EXTRINSIC SUPPORT
		16, ln. 7; Col. 18, lns. 3-7.
Computer network	<u>Computer network</u> = network for carrying digital data	Abstract; Fig. 2; Col. 3, ln. 10-Col. 4, ln. 48; Col. 6, lns. 30-61; Col. 15, ln. 25-Col. 16, ln. 7.
Monitoring activity of a user computer	<u>Monitoring activity of a user computer</u> = tracking or checking the status of a user based on a user's computer	Col. 1, lns. 31-49; Col. 2, lns. 7-26; Col. 2, ln. 58-Col. 3, ln. 9; Col. 7, ln. 65-Col. 9, ln. 62; Col. 11, ln. 41-Col. 12, ln. 11; Col. 14, ln. 1-Col. 15, ln. 24; Col. 15, ln. 25-Col. 16, ln. 22; Col. 17, ln. 5-Col. 18, ln. 3.
Pre-determined rules	<u>Pre-determined rules</u> = user-selectable criteria to control call processing	Abstract; Fig. 8; Fig. 10; Col. 1, ln. 53-Col. 2, ln. 26; Col. 2, ln. 66-Col. 3, ln. 9; Col. 7, ln. 65-Col. 9, ln. 13; Col. 9, lns. 33-62; Col. 10, lns. 22-50; Col. 11, lns. 41-62; Col. 12, ln. 59-Col. 13, ln. 67; Col. 15, lns. 14-24; Col. 16, lns. 8-22; Col. 17, lns. 5-66.
Affiliation list	<u>Affiliation list</u> = collection of data and rules to determine how to process a call	Figs. 1-5, 8-10; Col. 1, ln. 53-Col. 2, ln. 26; Col. 2, ln. 66-Col. 3, ln. 9; Col. 4, lns. 20-25; Col. 5, lns. 44-57; Col. 6, ln. 12-Col. 9, ln. 30; Col. 9, ln. 35-Col. 10, ln. 66; Col. 11, ln. 41-Col. 12, ln. 11; Col. 12, ln. 38-Col. 15, ln. 13; Col. 16, ln. 8-Col. 17, ln. 41; Col. 17, ln. 55-Col. 18, ln. 18; Col. 19, lns. 9-12.

Microsoft does not believe that the remaining claim limitations need to be construed, as their plain and ordinary meanings are clear and well known to one skilled in the art. Microsoft reserves the right to amend or supplement its proposed constructions.

Microsoft further identifies below the extrinsic evidence it may use in support of its proposed constructions:

Encyclopedia of Networking, Electronic Edition, Tom Sheldon (1998).
Newton's Telecom Dictionary, Harry Newton (various editions).
Random House Webster's Computer & Internet Dictionary, Philip E. Margolis, 3d ed. (1999).
Microsoft Computer Dictionary, Microsoft Press, 4th ed. (1999).

The IEEE Standard Dictionary of Electrical and Electronics Terms, Standards Coordinating Committee 10, Terms and Definitions, 6th ed. (1996).
Webster's New Unabridged Dictionary (1996)

Microsoft reserves the right to amend or supplement this list of extrinsic evidence, including but not limited to dictionary definitions, citations to learned treatises and publications, as well as the testimony of expert witnesses.

INTERROGATORY NO. 20:

For each and every claim of the '064 Patent, describe with full particularity Your construction of each limitation of each claim, identify all intrinsic and extrinsic evidence You contend supports Your construction, including without limitation all citations to the claim language, the patent specification, and the prosecution history, and any terms You contend should be interpreted under 35 U.S.C. §112, ¶6; and provide a claim chart that sets forth Your construction and identifies all intrinsic and extrinsic evidence You contend supports Your construction on a limitation-by-limitation basis for each and every claim of the '064 Patent.

RESPONSE TO INTERROGATORY NO. 20:

Microsoft incorporates all of its general objections and reservations of rights as if specifically alleged herein. Microsoft specifically objects to this interrogatory as overly broad and unduly burdensome to the extent it seeks constructions for claims that are not asserted in this investigation and for claim limitations that are not in dispute.

Subject to, and without waiving these objections, Microsoft states as follows:

Microsoft's proposed constructions and supporting intrinsic evidence are set forth in the table below:

TERM	CONSTRUCTION	INTRINSIC SUPPORT
Unified messaging system	<u>Unified messaging system</u> = system that allows messages of a data-centric network and a telephony-centric network to be received, stored, retrieved, and forwarded without regard to the communication devices or networks employed for the	'064 Patent, Figs. 1, 3; Col. 1 lns. 50-54; Col. 2, lns. 14-63; Col. 4, lns. 7-25; Col. 4, ln. 48-Col. 5, ln. 20; Col. 6, ln. 35-Col. 7, ln. 30; Col. 8, ln. 1-Col. 9, ln. 67; Col. 15, lns. 14-30; Col. 17, ln. 10-Col. 18, ln. 6

	DEFINITION	REFERENCE
	transmission of the messages	
Telephony-centric network	<u>Telephony-centric network</u> = network that carries telephony information used by devices such as telephones, pagers, facsimile machines, voice mail boxes	'064 Patent at Figs. 1, 2; Col. 1, ln. 50-Col 3, ln. 6; Col. 4, lns. 7-25; Col. 4, lns. 47-65; Col. 6, lns. 35-65; Col. 8, ln. 65- Col. 11, ln. 7; Col. 15 lns. 14- 60
Data-centric network	<u>Data-centric network</u> = network that carries digital data, primarily to facilitate information exchange among computers and computer peripherals	'064 Patent, Fig 1; Col. 1, ln. 50-Col 3, ln. 6; Col. 4, lns. 7-25; Col. 4, lns. 47-65; Col. 6, lns. 35-65; Col. 7, ln. 13-Col. 8, ln. 21; Col. 16 ln. 44-Col. 17, ln. 25
Communication services	<u>Communication services</u> = services that facilitate communications via said telephony-centric or data-centric network	'064 Patent, Figs. 1-4; Col. 1, lns. 50-59; Col. 2, ln. 24-Col. 3, ln.67; Col. 4, lns. 7-25; Col. 4, lns. 47-65; Col. 6, lns. 35-65; Col. 8, lns. 46-64; Col. 9, ln. 34-Col 11, ln. 36; Col. 11, ln. 51-Col. 13, ln. 16; Col. 13, ln. 40-Col. 14, ln. 32; Col. 16, ln. 9-Col. 17, ln. 25; Col. 18, ln. 21-Col. 19, ln. 9
Communication options	<u>Communication options</u> = settings that control how communication services will be handled	'064 Patent, Figs. 3, 4, 5, 6; Col. 1, lns. 50-59; Col. 3, lns. 7-67; Col. 4, lns. 7-65; Col. 6, lns. 14- Col. 7, ln. 30; Col. 8, lns. 1-45; Col. 9, lns. 23-33; Col. 10, lns. 1-22; Col. 11, lns. 8-21; Col. 11, ln. 59-Col. 13, ln. 60; Col. 14, ln. 1-Col. 15, ln. 30; Col. 16, ln. 9-Col. 17, ln. 25; Col. 18, ln. 21-Col. 19, ln. 9
Email service	<u>Email service</u> = communication service for receiving, storing, retrieving and forwarding emails	'064 Patent, Figs. 1, 3, 4; Col. 2, lns. 24-62; Col. 6, lns. 35-Col. 7, ln. 30; Col. 8, lns. 1-64; Col. 11, lns. 8-30; Col. 15, lns. 14-30; Col. 16, ln. 44-Col. 17, ln. 55; Col. 20, lns. 5-22
Voice telephone service	<u>Voice telephone service</u> = communication service for receiving, storing, retrieving and	'064 Patent, Figs. 1-4; Col. 2, lns. 24-62; Col. 4, ln. 7-Col. 5, ln. 16; Col. 6, lns. 35-

CLAIM TERM	MICROSOFT'S CONSTRUCTION	EXTRINSIC SUPPORT
	forwarding telephony information	65; Col. 8, ln. 65- Col. 10, ln. 60; Col. 11, ln. 59- Col. 13, ln. 7; Col. 13, ln. 40-Col. 14, ln. 32; Col. 15, ln. 14-Col. 16, ln. 43; Col. 20, lns. 5-22
Enable option for enabling or disabling the...communication service	<u>Enable option for enabling or disabling the...communication service</u> = communication option that controls the extent to which a communication service is implemented	'064 Patent, Figs. 3-4; Col. 11, ln. 36-Col. 14, ln. 58
Wherein the first communication service and the second communication service are selected from a call forwarding service, a follow me service, an alternate number service, a message alert service a fax receiving service or a paging service [found in claim 20 of the '064 patent only]	<u>Wherein the first communication service and the second communication service are selected from a call forwarding service, a follow me service, an alternate number service, a message alert service a fax receiving service or a paging service</u> = Wherein the first communication service and the second communication service are each selected from the following services: a call forwarding service, a follow me service, an alternate number service, a message alert service, a fax receiving service and a paging service	'064 Patent, Figs. 3-4; Col. 11, ln. 51-Col. 14, ln. 17; Col. 19, ln. 20-Col. 20, ln. 42.

Microsoft does not believe that the remaining claim limitations need to be construed, as their plain and ordinary meanings are clear and well known to one skilled in the art. Microsoft reserves the right to amend or supplement its proposed constructions.

Microsoft further identifies below the extrinsic evidence it may use in support of its proposed constructions:

Encyclopedia of Networking, Electronic Edition, Tom Sheldon (1998).
Newton's Telecom Dictionary, Harry Newton (various editions).

Random House Webster's Computer & Internet Dictionary, Philip E. Margolis, 3d ed. (1999).

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The IEEE Standard Dictionary of Electrical and Electronics Terms, Standards Coordinating Committee 10, Terms and Definitions, 6th ed. (1996).

Webster's New Unabridged Dictionary (1996)

Microsoft reserves the right to amend or supplement this list of extrinsic evidence, including but not limited to dictionary definitions, citations to learned treatises and publications, as well as the testimony of expert witnesses.

INTERROGATORY NO. 29:

For each and every claim of the '357 Patent, describe with full particularity Your construction of each limitation of each claim, identify all intrinsic and extrinsic evidence You contend supports Your construction, including without limitation all citations to the claim language, the patent specification, and the prosecution history, and any terms You contend should be interpreted under 35 U.S.C. §112, ¶6; and provide a claim chart that sets forth Your construction and identifies all intrinsic and extrinsic evidence You contend supports Your construction on a limitation-by-limitation basis for each and every claim of the '357 Patent.

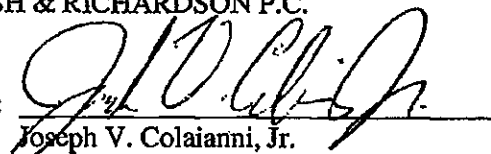
RESPONSE TO INTERROGATORY NO. 29:

See Microsoft's response to Interrogatory No. 20.

Respectfully submitted,

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CERTIFICATE OF SERVICE

It is hereby certified that copies of the foregoing **COMPLAINANT'S SUPPLEMENTAL RESPONSES TO RESPONDENT'S FIRST SET OF INTERROGATORIES 2, 11, 20, 29** were served this 3rd day of July, 2007 as follows:

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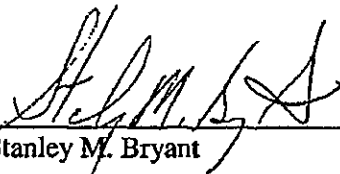
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